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ORIGINAL LECTURES.

GENERAL INTRODUCTORY LECTURE

Delivered at the Opening of the One-Hundred-and-Eighteenth Course of Lectures in the Medical Department of the University of Pennsylvania, October 1, 1883,

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GENTLEMEN,—The motto on the seal of the University—"Literæ sine moribus vana"—was no doubt intended to teach that learning is vain without morality; but the word *mores* really means manners, and the phrase signifies that one's manner of thinking and of acting towards other men not only stamps the moral character of the man, but also gives to his literary and scientific attainments their just value.

The word "*mores*," then, in our motto embraces the whole of a man's life, his manners, as well as his morals, and, above all, it sets up as the standard of conduct that which has been established by custom,—for such is the meaning of *mores* in the singular number. In the history of the world custom has the force of law. Many things that are immoral in one country or at one period are held to be moral and even praiseworthy at another epoch or by a different nation. A long-established custom may generally be regarded as having a real ground for its existence, and ought not to be laid aside without an equally substantial reason.

These thoughts have been suggested by published statements that certain medical colleges proposed to dispense with introductory lectures. Pardon me if I say that they struck me very much as a resolution would for gentlemen to dispense with the customary salutations which, in one form or another, are common to barbarous and civilized nations, and whose omission is everywhere regarded as insulting.

In every European country the annual opening of the medical schools is and has been from their very foundation celebrated as a festival, and a formal discourse is pronounced by a member of the Faculty upon some topic more or less directly related to medicine. A century and a half ago, themes such as these were chosen for the

introductory lecture of the School of Paris: "The Search after Truth in Medicine;" "The Obligations of a Christian Physician to Religion and his Country;" "The Maintenance of Harmony between Physicians and Surgeons."* To this day there is not a medical school in Europe where the same ceremonious inauguration of the year's duties is not observed in a similar manner. The University of Pennsylvania inherited it from the schools of Leyden and Edinburgh, and has transmitted it to the younger generation of medical colleges in this country. Formerly each professor delivered a lecture introductory to his own course, and the whole of the first week of the term was consumed by these lectures alone. More than twenty years ago the present plan of giving a single and general introductory lecture was adopted, and under it, as the representative of the Medical Faculty, I formally introduce you and my colleagues to one another, and hope that an acquaintance so cordially begun may ripen into a friendship that shall never die. Persons so introduced, even for business purposes, if they are well-bred, or even if they understand anything of human nature, will abstain from plunging at once into the special matters that concern them: they will spend a little time in trying to learn something of each other's disposition, motives, and objects, by conversation upon general subjects. I therefore follow the precedent set by many generations of professors, and ask your attention to certain topics which are more or less related to medicine, and about which you will, perhaps, not be displeased to hear an expression of opinion. It has been said that introductory addresses are not always to edification; that the speaker is under bonds to magnify his colleagues and the institution he represents. I shall not so far overstep the bounds of modesty. The Medical Department of the University needs no blare of trumpets to celebrate the yearly opening of its doors. But the occasion is one when it may be profitable to consider some of the claims of medicine to our reverence and duty, or rather to the duty of active service because of the reverence which is her due.

Devotion to medicine may be exhibited by fostering whatever tends to perfect a

* Corlieu, L'ancienne Faculté de Médecine, p. 131.

knowledge of it, or, in other words, by promoting the most perfect methods of education and practice. The education itself cannot be secured by the wisdom of its plan alone, nor merely by wise enactments of either state or college. Like everything else that has its roots in nature, the development of knowledge needs time for growth, as well as a proper soil and the fostering influences of sunshine and rain. It is well to remember that the bulky and succulent animals whose flesh now enables man to endure the severest toil were once small in size, and of tough fibre; that the swift, docile, and intelligent horse of Arabia or England is a very different creature from the coarse and wild animal from which it is derived; that the grains upon which mankind depend for daily bread were little more, originally, than weeds; that the fruits most renowned for size, aroma, and flavor were once insignificant, and crude, and harsh; that all the glories of modern horticulture have been developed by the patient art of man out of plants as simple and vulgar as the weeds that skirt a country road or thrive in the forest solitudes. And, more than this, we should remember that that still finer product, the flower of intellect, can only be developed by the most intelligent application of means that have been tested by the experience of ages. There is neither a royal road nor a popular by-path to knowledge. Knowledge is the food of the mind, and it must be subjected to processes like those by which material food nourishes the body. All material growth is the outcome of food digested and assimilated; and as strength is a result of growth, so wisdom is to be gained only by appropriating the lessons of nature and the experience of mankind, making them verily bone of our bone and flesh of our flesh by feeding the mind with the products of infinite wisdom and human intelligence, until we grow into the most perfect type of humanity and likeness to the Divine.

Physical differs from intellectual development in that it is limited by physical laws; but no limit has been discovered to the expansive powers of the mind. Yet high as its attainments have been, and higher far as they may be hereafter, there is but one way of securing them, and that is by gradual progress; literally step by step, and with constant watchfulness that each

step shall be a real advance upon ground so solid that it may be safely used to advance towards that ideal state in which every man can secure the knowledge required by his chosen career.

On something like this ideal plan the education of Europe has long since been framed, not, as here, by the chance association of well-intentioned individuals, but as one of the proper functions of the government; and hence in its most cultivated nations professional studies cannot be taken up at will by the ignorant and untrained. On the contrary, the youth almost from his cradle undergoes a systematic and progressive training in school, gymnasium, and university, and acquires, little by little, that discipline of his faculties, and that aptitude for gaining knowledge, which render his higher professional studies natural, easy, and profitable. Towards such a consummation as this the best systems of instruction in this country are tending, training the mind and the character for the various paths of usefulness, honor, and profit in life. We are gradually getting rid of the barbarous notion that each man is as fit as his neighbor for whatever vocation he may choose, and as gradually becoming convinced that for each professional career no amount of preparation can be too great, and that the only training which really insures legitimate success is one that begins in childhood and is steadily pursued and expanded over a constantly widening field until it reaches the level of professional education. It is perhaps true that no such systematic education can yet be generally exacted, but it is doubtless equally true that there is a large class, which is rapidly growing larger, of persons who, for themselves and their children, are determined that the means of acquiring the most perfect education shall not hereafter be lacking, and that, let others do as they will, let others sneer as they may at science, scholarship, and discipline, as for themselves they will serve no other cause than that of acquiring and imparting the knowledge on whose possession the rank of our country in the civilized world depends.

It may be difficult not to complain of the slow development of medical education in this country, but we should not be impatient, nor, least of all, discouraged. We should not forget that in every onward movement of civilization time is an es-

sential element. It is easy, on a superficial view of our medical history, to blame the apathy of the profession, but, on a deeper investigation, it is quite as easy to discern the causes of our slow progress, and the tardy and imperfect results of the well-meant and zealous efforts that have been made to improve our methods of professional instruction. Not now for the first time does the question of a higher medical education occupy the attention of American physicians. It is not by the movement in advance of Harvard or of our own University that the new departure began; it was not with the establishment, in 1847, of the American Medical Association for the sole purpose of promoting this object, that the agitation commenced. Long before that period the prophets made the land resound with lamentations over the ignorance of physicians, and held up side by side the short and meagre curriculum of our education and the prolonged and elaborate instruction of European physicians. Here and there among us were men who hung their heads and blushed for shame, and here and there some spurred forward to do battle for the truth, but, too often finding that their weapons fell upon stolid mountains of ignorance or on the stony walls of prejudice, they retreated discomfited and discouraged. The fulness of time had not yet come, nor has it come even now. The day is breaking, but noon is still far off. A century, almost, has passed, and we are yet only struggling into the light. We take pride in the unexampled growth of our country in population, wealth, and industry, in the mechanical arts, and in whatever ministers to the physical well-being of the nation, but whoever looks critically at our condition must admit that a corresponding progress has not been made in moral and mental culture. In the natural order of human progress the material must be developed before the intellectual, but the more closely we consider the history and actual state of the question the plainer does it become that our material prosperity has advanced in a disproportionately rapid manner, that whatever is supposed to lead to wealth is fostered by legislation, and that whatever has only intellectual claims is very apt to be ignored, if not contemptuously treated, by our legislators.

The ancient examples of the first colonists of Massachusetts and Virginia are apparently unheeded. It seems to be for-

gotten that these two colonies, the one among the smallest, the other one of the largest, took the lead in all the affairs of the nation by sheer force of superior cultivation, and that to this day one of those States holds a similar pre-eminence and owes it to the same cause. These and similar examples seem to be overlooked by, or are unknown to, those whom we elect to make our laws, and our legislatures spend their time in regulating trade, and manufactures, and agriculture, and other material interests, when they are not engaged in wrangling over the plunder of the public purse. The things that make a nation really great, the laws that compel as well as encourage the people to understand that life has higher aims than riches, better rewards than silver and gold, are either neglected or are enacted and administered without intelligence. Above all, and worse than all, the examples I have drawn from colonial times are unheeded, even if they are thought of, which they probably are not. Our ancestors, paraphrasing the ancient fable, concluded that although the several members are necessary to make up the whole body, and no one of them can continue to exist without the others, nevertheless the brain is king over all. And hence, while they provided for instructing all children in the rudiments of knowledge, they took care that those who were destined to a professional or scholarly or scientific career should have access to the best instruction that the time and the country afforded. These principles, be it observed, and these provisions were those of our English ancestry, of monarchists and not republicans, and, in the case of Virginia, of aristocrats and not democrats. Perhaps for that very reason when the colonies were fused into a nation it came to pass that whatever interest was displayed in legislating for education generally exhausted itself in trying to improve the primary and secondary schools, while higher knowledge and professional education were left to struggle for existence as best they could. Even worse than that: broods of colleges pullulated all over the country, many of which were not even respectable grammar-schools, and medical colleges were established in villages whose very atmosphere was fatal to science, and with professors whose ambition, however great, was not sufficient to excuse their ignorance, and who, never having had any

trained clinical education themselves, may perhaps be pardoned for believing that physicians can be made of young men who have never studied disease at the bedside under trained instructors. While the very fountain of supply of the medical profession was thus yearly becoming more impure, and graduates were multiplying who instinctively defended their own ignorance and the system that produced it, the better-instructed physicians of the country never ceased to protest against this evil and to propound measures for its cure. It was not clearly seen that to impose a more thorough system of education on nine-tenths of the medical schools was like bidding the cripple to "arise, take up his bed, and walk." How could they be expected to have the faith that works miracles? They, too, had regard for the "loaves and fishes," and so they have, for the most part, continued to crawl in the old and beaten path, and let who would outstrip them. Unfortunately, they not only use the path, but they cumber and obstruct it; they lie, as it were, across it, and hinder the advance of others who are more vigorous in action and of larger views than themselves. In plain terms, these obstructive schools, whether in villages or in populous cities, seduce to themselves young men who would otherwise have sought their education in colleges of a higher grade, and thus by one and the same act hinder the good work of their rivals and retard the professional advancement of the young men whom they graduate. It is probably safe to predict that so long as free trade in medical education is unchecked the most meritorious colleges will fail to attract to themselves the greater number of students, and the hope of educational progress, which has aroused the enthusiasm of not a few in each generation that has passed, will still remain an unfulfilled dream.

Is there no hope, then, except in the colleges that prefer character to emolument, and who have taken upon themselves the dangerous duty of leading the forlorn hope in its attack upon the strongholds of ignorance and selfishness? Is there no prospect, under our political system, of there being a restoration of those methods which were never before separated until they were torn asunder violently in our own age and country? Have knowledge and culture any essential antagonism

to freedom and political equality? Is there any necessary incompatibility between being at the same time a gentleman and a good citizen, a scholar and an honest man? Are we so far below the standard of the ancient republics that, unlike them, we can afford to despise knowledge and to foster ignorance?

To these and similar questions no one, I presume, will venture to give an answer that implies a confession of national or professional decline; and yet no one, I imagine, will be so bold as to assert that during this century and more of our national independence we have as a profession kept pace with the professional advancement in other countries, or even with the progress of those who cultivate other branches of natural science in our own country. Compared with American naturalists and scientists generally, the American physician does not shine. The written medical publications of the country, as a whole, and with some brilliant exceptions, are remarkable for superficiality, inexactness, partiality of survey, lack of largeness and firmness of grasp; and these defects are painfully conspicuous in our periodical literature. True, very true, several cities could be mentioned where the narrower provincial traits have become partially effaced; but it is because in them many of the leading medical men have served a second apprenticeship in foreign schools, and therefore shine by contrast with the background they illuminate. After all, it happens that the sonorous resolutions passed by our local, State, and National medical associations, the addresses of teachers, the essays in journals, and even the general *consensus* of the cultivated medical men in the profession, have not produced, except at two or three points, any material enlargement of the sphere of education. It would seem as if there was something both rationally and morally wrong in our judgment, when we see systems that have been wellnigh laughed out of existence on the other side of the ocean accepted and widely propagated here, and coquetted with by some of the most conspicuous members of the profession. Even worse than this, the pillars of professional dignity have been shaken, the bonds of professional morality have been loosened, and an effort made to abrogate the ethical law which has heretofore governed the profession, or to

substitute for it another expressly contrived to pander to acts that have hitherto been held as criminal. Our unlimited freedom has tended to loosen the bonds of professional brotherhood: once being assured that every man may become a law unto himself, professional disintegration will be hurried forward with the rapidity of geometrical progression. In a word, it has become only too plain that life without a head, however compatible it may be with zoophytic existence, is not so for the higher organizations to which our profession belongs. It is immortal, and can only "by annihilation die;" but whether its life shall be vigorous, productive, beneficent, and honorable, or feeble, barren, hurtful, and degraded, the events perhaps of this very generation may determine. I have no pretension to reconcile the incompatibilities of the subject and bring the politics of the day into harmony with the serious interests of science. A more monstrous conjunction would be difficult to conceive. Nevertheless, it seems to me that possibly by creating, first a thoroughly-educated medical profession, and then a delegated representative body from within it whose enactments should have the force of law, a legal tribunal might be established in each State, an *imperium in imperio*, which should have the absolute control of all things medical within the commonwealth. Is this a practicable plan, or is it only a chimera,—a nightmare engendered by the impossibility of digesting the manifold crudities of the existing state of affairs?

It must not be supposed, however, that any method of improvement, however wise in itself or well considered, can at once be made acceptable to those for whose benefit it was designed.

It is related of an eminent statesman that at the very entrance of his official career he was confronted by the stubbornness of the routinists and by the amazement of the ignorant. They were equally persuaded that nothing was possible beyond what their own narrow field of vision had made familiar to them, and he wasted his strength upon these obstacles as waves dash in vain against the cliffs. Just such a fate is too often reserved for men and for institutions who are better informed than their rivals, and who, animated by a nobler spirit of progress, are ambitious of having their work more perfect than they received

it; who endeavor to substitute fresher materials and more productive measures for those which have become effete or obsolete, and to breathe into a torpid body the vigor and animation of renewed youth. In literature, and even in science and art, the greater number are persuaded that their own particular coterie or school, the attainments of their own generation, the methods pursued in their native town or country, represent the *ne plus ultra* of advancement, and they are apt to resent as a personal affront every attempt to improve them. They too often forget that they stand upon a higher plane than their predecessors, and that the next generation will stand upon a superior level as certainly as that the sun at noon is higher above the horizon than at the dawn of day. Few things are recognized by men with more reluctance and difficulty than that they are not the centre of the universe; that in fact they are seldom anything at all unless they transmit to those who come after them the light they have received from their predecessors. It is not the physical characteristics, nor the moral qualities, nor the material wealth, alone, of one generation that descends by inheritance; quite as certainly the genius, the skill, the harvest of knowledge of successive generations and of individuals, are so transmitted. Well, then, may we cry shame upon those who stint posterity of its rights by a negligent or even by an unintelligent culture of their field of labor, or, worst of all, who dwarf the mental growth of those they educate by repressing criticism, by discouraging inquiry, and by the administration of that potent carminative, flattery, soothing even the restless minds of the young into a sweet contentment with ignorance and stagnation.

For more than half a century, as I have already said, there have never been wanting some who rebelled against the tyranny of educational routine, and who labored, for the most part in vain, to have their views accepted. How strange it seems that a country which prides itself upon its progressiveness, and justly so in material things, should be so far behind others in the highest departments of general and professional education,—a country, too, whose people, by the intermarriage of races, by political and social liberty, by abundance of food, by varied indus-

tries, and by experience of the vicissitudes of life, are the most actively intelligent of all the nations of the world,—how strange, I say, it is that they should still lag behind in the nobler fields of knowledge, and that those who have gathered the fullest harvests therein should find so few to understand or value them! Nevertheless, it cannot be doubted that this small number is increasing every year; that the voice which so long has been crying in the wilderness is at last echoed here and there by kindred spirits; that the long-buried seed is springing up to gladden the barren places of ignorance; and that the intellectual development of the nation will in the near future rival its material prosperity. While we are diligent in promoting whatever may quicken the advancement of medicine in its teaching, its science, and its practice, let us not be impatient. Let us remember the sublime image of the prophet that the Almighty was not in the whirlwind, but in the “still, small voice.” All beneficent advancement in the social, moral, intellectual, or political condition of mankind has been the outcome of slow and gradual changes which were often hardly perceptible, or at least did not attract general attention. The infant of one period becomes the adult of another by such silent development that the successive changes can only be measured by a comparison of widely-separated epochs.

What has been said of professional and national development is no less true of every individual's education for active life. The knowledge implanted during the long seed-time of childhood and youth, and even in the maturer period of early manhood, is slow in bringing forth its fruit; nor is it all grain fit to furnish the bread of intellectual and moral life. It obeys the law of universal nature that all fruit shall be small in comparison with the plant that produces it; the law that encloses the life of the great oak in the tiny acorn. Look at the sheaf of wheat before and after it has been threshed, and observe how little it has lost of its bulk; yet all that was valuable in it has been removed, and what remains is fit only to be trodden under foot of cattle. It is no less true of knowledge that its seeds germinate in darkness and often in unclean soils; that although it waxes larger and stronger, it may for a time give no promise of fruit; that even when its fruit is

matured it must still be winnowed from the tares of error; and that the residue of all this waiting and watching and culture is a very small bulk indeed compared with all that must be thrown away as valueless. But then this residue is the quintessence of knowledge, and contains within itself the vital principle out of which spring new truths to cover the fields of science with harvests to the very end of time. Let us not then expect or attempt to contravene the laws of nature, nor suppose that a harvest can follow immediately upon the seed-time of learning, whether it be of individuals or of institutions. The qualities of the young are adapted to them,—their faith, hope, enthusiasm, energy, and diligence; but they may lead to no immediate result. They are fair blossoms, but the fruit is in the future. Not that it will reach maturity as a matter of course; not without protection from frosts that kill and droughts that wither, and, above all, not without that innate vitality which all through the period of development gives the surest indication of the ultimate perfection of the fruit.

Moreover, the attainment of success is seldom like the growth of grain in well-tilled fields, where everything is propitious to its perfect development. It involves a perpetual conflict with antagonists and surmounting of obstacles. A traveller has told us of a mountain-side sprinkled with blocks of granite, so that most of the trees are obliged to twine their roots over the rocks or split them asunder in order to reach a little earth to nourish them, and yet they force their way upwards to a surprising height, and seem to grow into one with the rocks, so that they stand more securely than their easy-going comrades who are rooted in the tame forest-soil of the level country. So it is in life with men who have become great because they have strengthened and established themselves by subduing the obstacles that oppressed their growth.*

In this conflict the direction of the result is determined by the accidental relation between the active and passive forces engaged. But in every man there is a power to rough-hew the end, although the Divinity may give it its final shape. The forces that determine a man's career may be likened to those which propel and guide

* Heine, Pictures of Travel.

a steamer. The engine turns the wheels constantly in the same manner, moving the vessel onward, from whatever quarter the wind may blow or however the current may run. It is the pilot at the wheel that shapes its course in this or that direction, towards this or that haven. So the impulsion of genius must be directed by the guiding power of reason and judgment. The impulse may become dangerous without the controlling quality, and the judgment that directs would be in vain without the impelling force. All the great masters of knowledge of mankind have recognized this double influence that determines our career in life, our own will and the power of circumstances, and have shown how far it is possible apparently to bend events to favor us. I have already alluded to one expression of it. Here is another:

"Men at some time are masters of their fates:
The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings."
Julius Caesar, Act 1, Scene 2.

But I cannot pause to develop these ideas belonging to a subject which concerns us very deeply, because it relates to our conduct and success in professional life. Out of the many others that present themselves is one that by long habit, if not by natural instinct, attracts me more than others, for it seems to me that upon a right judgment in relation to it depend a physician's genuine success and reputation. I say *physician*, and not medical scientist: the man whose business in life is to cure diseases, and not the one who occupies himself with speculations or experiments regarding their nature or the physiological action of medicines. What Emerson* said of art in general is quite as applicable to the art of medicine. "Man is but 'naturæ minister et interpres.' As long as he watches for the signs she holds out for his guidance, his road will assuredly lead him towards the truth; but as often as he busies himself in finding out inventions which are evolved from his own consciousness, he wanders from the straight path and will inevitably be lost in the desert of doubt or in the quagmires of error." This is the philosophy of Bacon, by which all modern science is justified. On the other hand, may be found in a leading medical journal of Europe the following: "A medicine or a therapeutical method should not be em-

ployed merely because its successful applications are numerous enough to inspire confidence in its power. What is necessary above everything else is that the physician should *understand the precise nature* of the treatment he employs, the precise line of conduct he should pursue for each disease; not the more or less complete statistics of empirical results, but a clear and distinct explanation of the therapeutical effects, based on experimental physiology and clinical observation."† Blind leaders of the blind are such teachers as this one, who, seeing but half the truth, and that a subordinate and non-essential part, exalt it into the supreme, if not exclusive, power. As teachers, they train up pupils who, unless they resolutely tear away the errors that blindfold them, will find themselves discredited by the wisest men of their own generation, and out of harmony with the empirical art which has survived and governed from Hippocrates until now. During all these ages, the medical hypotheses and systems that have flashed a momentary glare upon the world have, like the utterly useless fireworks they resembled, gone out in stench and darkness. If there is one idea more absurd than another in regard to practical medicine, it is that the efficiency of treatment depends upon its being intelligible, or, conversely, that the physiological action of a drug bears any uniform relation to its therapeutical action. Are we so blind as not to see, so dull as not to apprehend, or so wrong-headed as not to acknowledge that in the list of medicines that has lengthened out from the beginning until now, and will hereafter stretch to the very crack of doom, there is not one, no, not a single one, whose virtues were discovered by science and not by empirical observation? Philosophers no more discovered medicines than they invented food. The instinct that taught man to eat also taught him to seek in the natural objects around him, and in the fruits of his own invention, the means of relieving pain and curing disease. As an art, medicine is next in antiquity to that by which men learned to distinguish wholesome from noxious food, to produce fire, to find shelter from the destroying elements, and defence against wild beasts and hostile men. When man began to suffer from wounds and bruises, the same

* Society and Solitude, p. 36.

† Lambert, Bull. de Thérapeutique, lxxix. 5.

instinct impelled him to seek and led him to find remedies for them, and to hand down his knowledge to his children and his children's children. As the river that bears great fleets upon its bosom may be traced through many a winding with constantly narrowing stream until its source is discovered in some tiny rill far away in the recesses of the mountains, so all human knowledge, so, above all others, medicine and its twin-sister religion, had their birth in that remote and mysterious primeval region which the faith of all nations has pronounced divine. Who taught man medicine? Who taught man worship? To these questions only one answer can possibly be given,—the power that created him and that made him what he is. And let it not be forgotten that he shares the medical instinct with the brutes, and that even they have always been his guides, and were perhaps his first teachers. If any one finds in this an ignoble origin of the art of medicine, let him consider whether religion is degraded by springing from the terrors of nature on the one hand and her beauty and goodness on the other. Let him also ask himself whether the grandeur of the oak or the charm of the rose is lessened because its roots are embedded in dirt and decay. It is the shame of the arts and sciences, as it is of many men, that they try to ignore or to conceal their humble origin, although nothing but imbecility should prevent their remembering that a few generations ago, more or less, they too were sons of the soil.

Yes, there are some who seem to believe that medicine sprang full-grown from the brain of Minerva, as the goddess herself was fabled to have sprung from the brain of Jupiter. They ignore everything before Galen or Hippocrates, when they ought to know that even the greater of these, the father of medicine himself, invented far less than he compiled, and that his works, as they have come down to us, represent not so much his own genius as the growth reached by medical knowledge in his day. The scientific physicians of the present generation too often remind one of the iconoclasts of the English commonwealth and the atheists of France. They found it easy to destroy, but to supply the place of what they destroyed was beyond their skill. By infusing into the popular mind a portion of their own self-sufficiency they have helped on the baleful work of the Nihilists,

whose creed is a negation and whose aim is destruction, so that now on whichever side we look are heard only the scoffs of these self-enlightened people at everything on which the soul's faith and the understanding have securely rested from the beginning. They sneer at virtue as a mere matter of temperament, a constitutional state that has no more to do with conscience or responsibility than one's sex or the color of the skin. They would dethrone the Lord of heaven and earth; but while they laugh at religious faith they worship the little idol they have evolved out of their own consciousness, and whose proper name is vanity. They deride the wisdom of ages, and would create anew the science and art of medicine, not considering that there must come after them a generation that will treat their doctrines with the contempt that they themselves pour upon those of their predecessors; not even conscious that all their lives they have been sapping the faith of the people in that which, next to religion, they have always venerated, and rendering physicians themselves sceptics, if not scorners of the art by which they live.

Yes, for this and for much more evil are the overweening pretensions of misplaced medical science answerable. They are responsible in a great measure, also, for the wave of quackery under which the medical profession is in danger of being submerged. For the people instinctively argue, "If physicians no longer have faith in medicine, why should we have faith in them?" and therefore they wander off into the abominations of quackery, be it gross and vulgar or take the shape of ethereal quintessences, simply because the prophets of these false systems are wiser in their day than the children of light, and "wear the livery of heaven to serve the devil in," and are, above all things, self-confident and incapable of shame. The so-called intellectual regions of our country are precisely those in which these miserable frauds prevail and thrive most vigorously, where physicians are most prone to proclaim the nonentity of their art, where human rights are held to be superior to human duties, where the brain, the intelligence, is so strained by education and by the habits of life that it oftener than elsewhere is shattered or withered, while the heart, the moral nature, becomes chilled, and dwarfed, and shrunken, and the moral aspects of life,

the sentiments of reverence, of gratitude, of pity, sympathy, and love, are felt to be encumbrances in the struggle for wealth and distinction, and are not allowed either to sanctify research or to consecrate its fruits. No, gentlemen, no! "What God has joined together let no man put asunder." Science and art are portions of one complete whole. But while natural science cannot exist without art, not only can art exist without science, but it always did exist before science was dreamed of. Medical art changes but little, except as a tree is changed in growing, but medical science is a creation; the science of to-day is very different from that of yesterday, and we may be very sure will be found quite unlike the science of to-morrow. The history of medicine may be pictured as two streams whose general direction is parallel, and whose waters, if for a time they mingle, on the whole pursue an independent course. Theory is sometimes a stream rushing over a stony bed between rocky and treeless shores, tumultuous, winding, shallow; sometimes like one of those rivers of our West, issuing in great volume from the mountains, but dwindling as it goes, until it disappears in the barren desert. But art, be it medical or any other art, is a broad and, it may be, almost a sluggish stream that creeps or sweeps onward between banks that widen as it goes, fertilizing them in every portion of its course, filling granaries with corn and storehouses with wine and oil, and planting marts of civilization on its shores. Art it is that has given us all the resources of medicine, which, if we use them aright, will bring honor to it and profit as well as honor to ourselves; but if we slight it, if we deride it, if we proclaim our disbelief in it even while teaching or practising it, we bring discredit upon what it is our misfortune not to have comprehended, and set an example of faithlessness which we may be sure that the unlearned in medicine will use to justify their own apostasy.

At the risk of exhausting your patience, I venture upon one more reflection suggested by the previous remarks. I wish to remind you that medicine, although it has existed from at least the time of Hippocrates, twenty-three centuries ago, had not, and could not have, during more than two thousand years of that period, any foundation such as we now call scientific, for until about two hundred and

fifty years ago the circulation of the blood was unknown. Later still came the discoveries that, along with the circulation, constitute the basis of modern medical science. Then, and only then, for the first time was it learned that the animal organism is developed and sustained by the conversion of food into flesh and blood on the one hand, and the supply of air on the other hand; still later than this it became known how all the vital movements of the organism as a whole, and all the mutual relations of the different organs, are maintained by the mysterious power of the nervous system; and finally it was learned how the body is doomed to death by the inevitable decay of the mechanism upon which the maintenance of life depends.

I say that all this science of medicine, and infinitely more connected with it, is a creation of but yesterday compared with the venerable antiquity of medicine as an art. It is evidently, therefore, independent of the art, as the art is independent of the science; and whether the science be true or false, and in whatever degree true or false, it has no more essential connection with the art of healing than the theory of the tides has to do with the actual flux and reflux of the ocean that surrounds the earth. It is of importance to us all, and at every stage of our medical career, but of the utmost importance to those who are just entering upon the study of medicine, to keep clearly before them that medicine has two sides as distinct from each other as all facts are distinct from the explanation of those facts; that while the one is essential, and if true is everlastingly true, the other is but of yesterday, is always vacillating, and can never be absolute, and that however much it may assist the mind to group together medical facts and refer them to general laws, it can never be more than a provisional formula. In the sphere of actual practice all hypotheses, theories, principles, must be subordinated to empirical rules, for they are founded upon the observation of disease and not upon the conclusions of scientific theories, and are as true in this nineteenth century as they were two thousand years ago, before the circulation of the blood was dreamed of, or a single organ of the body was accurately known in its structure or its function. The aim of science is to explain what art discovers; but the discovery

remains, whether the explanation be true or false. By all means let us use the principles of science in studying disease and its treatment, but use them as threads to guide us in the labyrinth of research, as scaffolding to aid us in building the solid walls of concrete facts, so that when we have reached our goal we may cast away the thread; when we have raised the temple we may throw down the scaffolding that is no longer useful.*

*The remarks in the text are in harmony with what appears to me to be the true and legitimate spirit of medicine as it is displayed in the writings of all ancient and modern physicians who have really enabled us to improve the cure of diseases. They represent the spirit of the English and French schools of medicine as opposed to the German and Italian schools, the clinical as contrasted with the speculative methods of studying and treating diseases. In each of these national schools there are exceptions to the rule which governs them; but as a whole the former are practical, the latter are theoretical. In the United States, where a large proportion of the best teachers have been trained in European schools, and especially in those of Germany, and where many of the leading physicians are born and educated Germans, it is not to be wondered that the peculiar medical doctrines and methods of that country should have been imported here and engrafted on our medical body. That these doctrines and methods are discordant with the essentially practical genius of Americans, and must sooner or later lose their influence, appears to me certain. But, in the mean time, it behooves all who have an opportunity of addressing medical students to warn them against the barren and injurious methods of thinking and practising which are tending to destroy our faith in medical art, and which have already carried tens of thousands of patients away from true medicine into the absurd and most mischievous systems of quackery.

The absurdity and danger of "scientific" medicine in practice have been a thousand times exposed in ancient and modern times, but I venture to place on record here one or two utterances respecting it which most accurately express my own convictions. Some fourteen years ago, Dr. Elam, in London, wrote as follows:

"Medicine should be, before all things, the *art of healing*. Our first and fundamental error in theory has been the overlooking of this definition, and viewing medicine as a science. Now, in any proper acceptance of words, medicine is not, and can never be, a science; it is an art *sui generis*—fed, fortified, and enlightened by science,—but in no wise a science in itself. This is not a mere speculative matter,—an affair of terminology. So long as we view medicine as a science, so long shall we be disappointed in our progress and our results. Science is steady, certain, and progressive; art is vacillating, doubtful, and limited. If we expect exactitude and certainty in medicine because we rank it as a science, we shall be ever failing, ever doubting, and losing our faith, and, as a necessary consequence, our zeal. We can never hope to reduce medicine to mathematical formulas in which disease and remedy will represent one side of the equation, and health the other. We deal with such an infinite variety of unknown quantities and indefinite variables that we can never hope to reduce them to any fixed expression that can have a practical value. Besides disease, we have to deal in each case with age, sex, temperament, and previous history,—elements which can to some extent be allowed for; we have also to deal with idiosyncrasy, with heritage, and with the thousand social surroundings which will always baffle our calculations and stultify our foregone conclusions. . . .

"Science is knowledge, but such knowledge is not power in any practical sense. . . . By science we know disease; science is diagnostic. It is by art that we treat it; art is therapeutic. All our art is derived from experience. . . . Science knows, and is precise and positive, art is variable and selects. Science submits to no ignorance, but art is ignorant of much. Science is essentially contemplative, art is active. . . . Science puffeth up, art buildeth up." Pure science has, in general, done but little for art, while art has constantly and largely been contributing to the progress of science. . . . Medicine has the same relation to science that poetry or painting has; and inasmuch as the most complete knowledge of the laws of perspective and the theory of light and colors would fail to make a painter, or the most intimate acquaintance with the rules of versification would

But I must hasten to conclude this address, made fragmentary by the very pressure of the topics that clamored for a hearing, and in doing so beg you to look beyond your present studies and keep your eyes fixed upon some elevated goal that you intend to reach. We are often bidden to take short views of life, to take no care for the morrow, to bide our time, and the like, precepts that may have their application, but it is not for you. On the contrary, what your studies are, and the spirit in which they are pursued, such in all probability will be your future attainments and prosperity. It is only the weak and narrow-minded man who bounds his horizon by his daily work. The strong man is the hopeful man who fulfils his own hopes. He is like the navigator who steers by his compass and the celestial bodies, and spreads his sails to catch every favoring breeze, knowing that beyond the visible horizon lies the haven towards which his hopes of fortune impel him, and that if he guides his bark aright success will sooner or later crown his voyage. The wise man has warned us not "to make haste to be rich," and the warning is no less worthy to be had in reverence by those who seek the riches of wisdom and knowledge and skill and power than by those who covet riches that are of the earth, earthy. No more than Rome was any man's fame ever built in a day. It is the result of patient labor, of sagacious foresight, of daily additions to knowledge, of incessant training of the faculties, while

fail to make a poet, so the profoundest knowledge of physiology and of all the sciences tributary to medicine would entirely fail to make a competent physician. *Medicine is a faculty to be acquired, not a lesson to be learned; . . . not to be reduced to the hard and inelastic formulæ of science. In itself, I reverence science; but, in the interests of true progress and of humanity, I trust we shall, for the future, hear more of the art of healing and less of the science of medicine.*"—*London Lancet*, June, 1869, p. 775.

Nearly ten years after the utterance of these admirable truths they were echoed in the Hunterian oration of Dr. Moxon: "The biologist and the physician," he says, "work in opposite directions, if upon the same lines. The biologist, if he shows any aim at all, stretches himself out to learn the first beginnings of life and its smallest minutiae. The task of the physician is in quite a different direction. . . . The physiologist considers the origin of the spirit of life, while we have to consider the very different question of how the living thing beats itself to pieces. . . . Our modern tendency is to spend the larger part of a man's time in teaching him professional biology; and there is growing up a generation of physicians, through the long prevalence of that system, who are so imbued with the scientific spirit as absolutely to forget, in the highest issues, that their profession has any practical aim."—*Medical Times and Gazette*, March, 1877, p. 228.

To the acceptance of these doctrines the medical profession must sooner or later return, as it always has done after a season spent in "whoring after false gods." The theories that have from time to time enslaved it are, after all, but superficial influences, while all the while the great body of medical art founded upon clinical experience has remained as undisturbed, during the lapse of ages, as the depths of the ocean are by the storms that vex its surface.

the mind is steadily fixed on the proposed end, and every power is strengthened by the effort to attain it. Weak men live from hand to mouth, from day to day; they are literally day-laborers, and their rewards are, in like manner, transient. They lay up no capital for future use. They are like architects who construct many foundations, but build nothing upon them, and, in the end, leave behind them only the ruins of what should have grown into palaces and monuments. Strong men, wise men, are not solicitous about the judgment of the world on their unfinished plans: they do not waste their time and strength in courting the applause of the transient present. They let their work speak for itself. If it is approved by those who are fitted to judge, so much the better; but if it is not, none the less do they persevere in their determined plan, assured that, if they have judged rightly in the beginning, they will in the end reap the reward that never fails to crown sooner or later all that is substantially excellent. It is sad to see how much wasted power, how much misdirected zeal, how much untimely withering of fruit, there is in the world; how much labor is unrequited because it had no fixed purpose to attain; how many a goodly harvest is lost because it was put to the sickle before it was ripe. "Bide your time," my young friends, but abide not in idleness or sport, but in diligence, in steadiness, in perseverance, and, above all, in that faith which overcomes,—faith in yourselves and in the end on which you have fixed the eye of your ambition.

"Build, that the walls to coming generations
Your skill, your strength, your faithfulness, shall tell;
That all may say, as storms and centuries test them,
The men of old built well."*

THE GENIUS OF MEDICINE.

*An Inaugural Address delivered at the Opening of the
Fifty-Ninth Annual Course of Lectures at the Jefferson
Medical College, Philadelphia, October 1, 1883,*

BY THEOPHILUS PARVIN, M.D., LL.D.,

Professor of Obstetrics and Diseases of Women.

GENTLEMEN,—A just conception of medicine is essential to the best medical study and to the most successful medical life. He who would be a physician, indeed, must know the true character of medicine, its spirit, its genius. As thy

faith is, so shall it be unto thee, has a far wider meaning than that which belongs to a single event of life. Thy faith? Thy conception, thy belief, thy ideal, thy fixed conviction, a power permeating the soul, *informing* desire and thought, pervading words and deeds, and living in thy life.

It is, therefore, believed that the Genius of Medicine is an appropriate theme for the occasion,—the beginning of the annual course of lectures in this honored institution.

But what is the Genius of Medicine? As the prism separates the solar beam into the many colors which, again combined, make pure light, so we may take the various characteristics of this genius, which, by their union, make its living power.

First, this genius, this spirit of medicine, is scientific. A witty Frenchman,† referring to the scientific claims of medicine, gives, as a positive proof that a science does not yet exist, the fact that such alleged science is held to be common property, adding, in illustration, "My porter does not hesitate to diagnose a disease, to point out its cause, to prescribe a remedy, and to predict the result. He thinks he has a right to do so, and it seems that he has, for one readily listens to him, and often follows his advice."

But tried by this test many an admitted science would lose its claim. Meteorology is a science, but are weather-prophecies confined to those who have studied it? There are many persons, both in country and in town, who have that

"Old experience which doth attain
To something of the prophetic strain,"

and who often foretell with great certainty the weather which the day or the morrow will bring forth; at least their prophecies are quite as frequently verified as the correct diagnosis and treatment of disease are made by the ignorant. Theology is a science, and yet a well-known lawyer, possibly more famous for his oratory than for his legal learning, does not hesitate to decide the gravest theological problems,—giving his solution from the platform with the greatest generosity to his suffering fellow-beings at fifty cents a head,—problems that have engaged the prolonged and profound study of great divines, such as Edwards, Stuart, Alexander, Hodge, Breckinridge, Thornwell. Law is a science, but

* S. H. Browne, *Continent*, October, 1882.

† Louis Peisse, *La Médecine et les Médecins*.

some man who never gave a thought to Blackstone or Coke, except possibly as suggestive of winter fuel, may offer to solve legal problems, and sometimes may predict the decision of a court, or the verdict of a jury, quite as correctly as even a Philadelphia lawyer.

But, passing from this negative criticism, Comte's definition of a science as that knowledge which enables us to foresee and foretell results, justifies giving this name to medicine. Let any case of common disease be examined by half a dozen educated physicians, and there would be in almost all instances entire agreement as to the nature of the malady, as to its course, and as to the means advisable to alleviate it or to shorten its duration. The natural history of diseases is so well known that the physician can in most cases foresee and foretell their course. "It is not essential to science that it be at any given time complete or free from error. It is called science in reference to the aims and methods of the intellectual process of which it is the result, not in reference to its own absolute correctness and completeness." What adventurous explorer in any part of the domain of physical science dare say he has seen the pillars of Hercules, that there is nothing more to learn, or nothing to unlearn?

The certainties in diagnosis and in prognosis given in recent years by the thermometer, the microscope, the ophthalmoscope, the laryngoscope, the spectroscope, and the sphygmograph, add to the just claim of medicine to be called science; and, finally, the electric light waits to reveal pathological changes in the living hitherto recognized only after death.

In the department of therapeutics very important advances have been made in recent years; indeed, the treatment of disease becomes every year more scientific, less empirical. In this treatment physicians generally prefer a few and simple rather than many and compound remedies, an Enfield rifle rather than a Gatling gun. But in this they imitate the great masters. Hippocrates used but few medicines. Sydenham half jestingly said that he could carry all the medicine he needed in the head of his cane; and Boerhaave, I believe, said that the enlightened physician could practise medicine with opium, cinchona, tartar emetic, wine, and water. If Hoffman were to return to this earth, he, while still

using his famous anodyne, would rejoice in the great advance made in therapeutics, and cheerfully recant the famous declaration of scepticism he made: *Fuge medicos et medicamenta, si vis esse saluus.*

While rejoicing in the important position which medicine holds to-day, the student must not forget that the foundations of our science were laid, and the form of the superstructure largely directed, by that noble Greek who must ever be among physicians as Alexander among warriors, Homer among poets, and Plato among philosophers,—the divine Hippocrates. It seems certain that neither the Jews nor the Egyptians made any important contribution to the beginning of scientific medicine, though recently it has been stated* that the physicians in the time of the Pharaohs recognized the heart as the centre of the circulatory system, and referred the beating of the pulse to its movements. Still other discoveries are attributed to the priestly physicians of the Nile.

Nevertheless the general rule is, as stated by Boyer, that in all peoples who have left durable traces in the arts and sciences, the arts have flourished first; the imagination awakens the other faculties, the poets open the scene, the philosophers and *savants* follow. But Egypt failed to take the first step. The Jews, indeed, had their poets, whose lips were touched with hallowed fire, and whose sublime utterances are for all the races and all the ages; but it must be remembered that this people had an admirable system of preventive medicine, and therefore but little necessity existed for the study of the cure of disease.

Darembert† has clearly shown that Greek medicine, the origin of the medicine of to-day, came neither from the temples, nor from the gymnasia, nor from the schools of philosophy, but from the laboratory of physicians. In Homer the medicine is quite human, and even on Olympus the physician of the gods used means familiar to the physicians of the Greek army. He further observes that theurgic medicine occasionally appears in the time intervening between Homer and Hippocrates, but true medicine still lived without eclipse, just as it lives to-day without eclipse by spirit-rapping, animal magnetism, or homœopathy. *Æsculapius*, who

* Dr. George Elbers, *Contemporary Review*, June, 1883.

† *Histoire des Sciences Médicales*. Paris, 1870.

was the chief medical officer of the Greek army, seems to have been brevetted for distinguished services: as he did not want an office, he was given divine honors. But, sad to say, getting his godship had a very bad effect upon his character; he became so extremely avaricious, he did worse than engage in the grave-robbing business, he went to breaking open the jail and letting prisoners out, provided they paid him well; in other words, he restored the dead to life. As this sort of work threatened to depopulate Hades, Pluto, who was engaged in the wholesale undertaking business, made appeal to Jupiter, who, very properly and promptly, with one of those many thunderbolts which he had at hand, knocked Æsculapius forever out of time. Since then doctors have let dead people stay dead, influenced to this conservative conduct quite as much by fear of the fate of Æsculapius as by the reason which Molière has put in the mouth of Sganarelle: "The best of this profession is, that there is the greatest honesty and discretion among the dead; for you never find them complain of the physician who has killed them."

But, leaving myths that came into the history of medicine after Homer sang the wrath of Achilles, let us see something of the work that Hippocrates did towards the establishment of scientific medicine. He emancipated medicine from superstition and charlatanry; he co-ordinated facts that had been collected, separated between the true and the false; he taught that pathology was a part of physiology; he urged the importance of careful clinical observation. Lord Bacon, whose great mind grasped so many subjects of human knowledge, irradiating all it touched, gives just honor and importance to medicine, but condemns "the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they were judged by recovery or death."

That the medical views of Hippocrates were eminently catholic is shown by the fact that many of the schools springing up after his day claimed his authority; but he belonged to none; he belonged to all, for he had uttered such truth as each had; he had united these individual truths in a harmonious whole, which they took asunder, trying, as some medical sects

do to-day, to build a house with a single brick. Malarial fever is known to occur sometimes in puerperal women, and within a few years a question of priority in its description has been mooted relating to two distinguished American physicians. But the disease was most accurately described in the beginning of the present century by Oslander, and by Torti at a still earlier date. I believe we must go back very much farther, finding the first reference to the disorder in Hippocrates: certainly he has described a disease now known as puerperal septicæmia. Littré has shown that this man, whom Galen termed the greatest of physicians and the first of philosophers, observed facts more than 300 years B.C. which have been re-discovered in our day. Thus, in "the Epidemics" he describes a disease characterized by cough, which was often followed by paralysis: this disease was diphtheritic angina, sometimes simple angina, as shown by Gubler and Trousseau. For twenty-two centuries the connection between angina and paralysis was not recognized. According to Laennec, Hippocrates furnishes the germ of auscultation.* He describes paralysis of the veil of the palate accompanying paralysis of the face; lesions of the right side of the brain causing paralysis of the opposite side of the body; muscular atrophy following paralysis; erysipelas of the throat complicating erysipelas of the skin; gangrenous erysipelas; hydatid cysts of the lung.

The character and work of this wonderful man have thus been summed up:† a man grave, modest, wise, charitable, careful of the dignity of his art, avowing his frequent powerlessness; a sagacious observer, endowed with exquisite medical sense, judging phenomena in their connection, he assured to medicine a form which has triumphed over the ages.

But, further, the genius of Hippocrates made known what Chauffard‡ eulogized as the traditional truths of medicine. These primordial truths are the autonomy of life, the unity of existence, its spontaneity, and its own finality. These principles were the soul of Hippocratic medicine; they animated it, gave it life, and, under their inspiration, though the anatomy and physi-

* "Physicians who understand percussion and auscultation have half of medicine and two-thirds of diagnosis."—*Darwin-borg*.

† *Revue des Deux Mondes*, 1883.

‡ *Des Vérités traditionnelles en Médecine*.

ology of the day were in almost hopeless infancy, a body of medical doctrine, a system of medical science, was formed. From age to age, through all the development of the science, these truths, the first views because they are first in splendor and power, have remained in some way immutable, reappear with increasing power, lifted above all strifes, all vanishing opinions of the day, receiving a sovereign authority by common consent, transmitted from master to master, from teaching to teaching.

Medicine is not only scientific, but it is progressive; onward is ever the voice of its genius and the example of its teachers and disciples. The progress made in the past fifty years is but faint prophecy of that which will be made in the next fifty, that which hath been but the earnest of that which shall be, for the scientific spirit is everywhere quickened, the means for scientific research constantly increased and improved, the great army of workers becoming larger, and the facilities for intercommunication and for interchange of thought so great. It seems a sad thought that a successful medical book rarely lives more than twenty years; but the fact is a striking testimony to the rapidity of medical progress. How the words of our great master come to us with their simple majesty, and yet almost with the sadness of a threnody: Life is short; art is long; the occasion fleeting, experience fallacious, and judgment difficult.

The very fact that so much remains to be discovered in medicine makes it one of the most inviting subjects of study, "for the sciences always studied with keenest interest are those in a state of progress and uncertainty; absolute certainty and completion would be the paralysis of any study."

Honest pleasure and just pride in discovery await the diligent medical student. Read Aselli's account of the joy he had when he discovered the lymphatics. Think of the undying glory which belongs to the name of Harvey from his discovery of the circulation of the blood, a discovery which at first was denied by many of the physicians of his day, but gradually gained acceptance. Strange, too, to say, one of the most learned of American physicians, the late Dr. John Redman Coxe, of this city, published a work to show that of all the ancients and moderns Harvey had least to do with the discovery which has made his name immortal.

Sometimes the zeal for discovery has been so great that a false fact has been found, and physicians have disputed the question of priority: thus, two* of the profession in the seventeenth century quarrelled as to which was the first to find an acid in the blood.

Important as are discoveries in anatomy and in physiology, those discoveries which are directly applicable to the prevention of disease, such as vaccination, or for the immediate relief of pain, such as the use of anæsthetics, adding at once to the power of medical art, seem the more important. The word "art" is probably derived from the Greek *ἀρετή*, signifying *goodness, excellence, power, force*; it is, indeed, in medicine its practical goodness, excellence, power, force. Increase in medical science is the enlargement of medical art. Science, knowledge organized in a system, a body of truth, reasons, but art acts; science has laws, art has rules; science does head-work, art hand-work; science asks *why*, art knows *how*: in medicine the one is the necessary complement of the other.

In one respect the medicine of to-day is probably inferior to that of Galen's time, the inferiority being in the number of specialties. Then there were not only oculists, lithotomists, herniotomists, and others, but also doctors who did nothing but bleed, some from artery, others from vein, and doctors who limited their practice to giving clysters. If the last specialty is revived in our day, those devoted to it would doubtless take the name of *clysterodidomatists*. Ah, how the length and euphony of that word, which can be rolled as a sweet morsel in the mouth, and which one speaks so trippingly on the tongue, *clysterodidomatists*, would excite the just envy of ophthalmologist and gynæcologist, who have so greatly enriched medical language with sesquipedalian and euphonious Greek compounds!

The genius of medicine is catholic. This catholicity is evident, first, in the physician's comprehending the entire nature of man, and thus understanding his true character. To the mere physiologist, man is simply a living organism, with machinery working not unlike that of a monkey or a dog or some other inferior animal. The psychologist tells

* Vieussens and Chirac.

us, in the words of Phavorinus, which were written upon the walls of Sir William Hamilton's lecture-room in the University of Edinburgh: On earth there is nothing great but man; in man there is nothing great but mind. The divine has his attention directed especially to man's moral nature, and seeks to bring it under the control of the highest motives and the most sacred influences. The political economist sees in man either producer or consumer; the legislator sees him the subject of poll-tax, if he be a man, but, if he be a woman, only a promising candidate for the burden and responsibility of a poll-tax, which then, in the belief of those who are not yet educated up to the advanced thought of the times, would be a very great poll evil. The poet, the novelist, the philosopher, each has his ideal man, and generally this ideal is very different from the actual man as the physician knows him. The doctor comprehends the three-fold nature of man,—man intellectual, moral, physical,—and thus comes to a true anthropology. He sees him, not in the framed and flattering picture of the artist, not arrayed in the clothing of social conventionalism, but without artificial adornment, and stripped of all disguise; he sees him at all times, in all places, in all circumstances; he knows the glory and the shame, the power and the weakness, the valor and the cowardice, the goodness and the wickedness, the selfishness and the self-sacrifice, the virtue and the vice, the joy, the hope, the gratitude, the love and the despair, the hate, the ingratitude, the sin and the sorrow, of this human nature.

The genius of medicine is catholic as to its creed. From Hippocrates on, true medicine has lived despite the work of system-makers and the defection of sects. Theurgic medicine, dogmatism, methodism, empiricism, humorism, pneumatism, iatro-mechanism, iatro-chemicism, vitalism, animism, no more did it permanent harm than can any of the unnamed pathies of the day.

"Like clouds that rake the mountain-summit,
Or waves that own no curbing hand,
How fast has system followed system
From sunshine to the sunless land!"

A whole truth, a half truth, has sometimes been made the foundation of a theory of a school, while the great body of medical verities was ignored. How many false

facts, too, as well as false theories, have been brought forward in medicine! Think of so able a man as Van Helmont believing and telling this story: A citizen of Brussels, having lost his nose in a combat, consulted a surgeon named Tagliacozzi. The latter, to cure the deformity, took a flap from the arm of a domestic, and the patient returned home. Thirteen months after, he was suddenly surprised by finding his nose becoming cold and immediately mortifying. How did this happen? After many lamentations and inquiries, it was learned that the domestic from whose arm the nose had been borrowed died at the moment the organ became cold. Think, too, of the illustrious Sylvius, compelling his patients to drink from one hundred and fifty to two hundred cups of tea every day. Fortunately, this practice did not prevail in 1774 in this country, when patriotic Americans were emptying the Chinese leaf by the ship-load into the sea.

Belonging to the same century as Sylvius, we have the illustrious Descartes proclaiming that man and all animals are mere automata, machines, and anticipating Professor Huxley's comparison of a man to a clock. Descartes was more generous than some who have adopted his automatic theory, for he allowed man a soul, seating it upon the pineal gland, like an English sparrow perched on the top of a telegraph-pole.

As Professor Huxley* has so highly commended his theory of automatism, let me quote a distinguished physician's† general estimate of his contributions to medicine: "Descartes introduced into physiology, and maintained in anatomy, more new errors than he destroyed old. He was the parent of the worst part of the iatro-chemical school, and the Cartesian physicians were generally very bad physiologists and only moderately good anatomists."

Descartes denied mind to animals; they did not feel any more than the plant feels the warmth of the sun or the chill of the frost; and thus vivisection was encouraged. He was himself a vivisector, and his example was followed eagerly by the recluses of Port-Royal, who made the following a syllogism of their logic: No matter thinks: every soul of beast is matter: therefore no soul of beast thinks. I would rather take my lesson in the treatment of animals from

* Address before the International Medical Congress, 1881.

† Darenberg.

Coleridge's "Ancient Mariner" than from Descartes :

"He prayeth well who loveth well
Both man and bird and beast."

The genius of medicine is catholic in its relations to science, to philosophy, and to social interests, and is one of the most important factors in the progress of civilization. But these topics can only be suggested, not enlarged upon.

Medicine is catholic in its practice. The physician is ready to relieve the poor as well as the rich, the mean as well as the noble: the cry of suffering, no matter whether it comes from hall or hovel, from virtue or vice, from learned or ignorant, is his call to duty. Hippocrates expressly directed that the physician sent for by two patients, one poor and the other rich, should go to the former; and the illustrious Bayle attended to poor clients, spending upon them in the latter years of his life a large part of that which he had accumulated by practice, saying that the rich could always get doctors. When an urgent call to the sick comes, the physician rarely thinks of his fees, but, if possible, goes at once. However, our charities for the relief of the sick poor have become so well organized, hospitals and dispensaries abounding where the best professional services can be had gratuitously, that there is less demand for the sacrifice inculcated by Hippocrates and practised by Bayle and so many others.

The genius of medicine is beneficent. It is not necessary before an audience so largely professional as this to argue that medical agents have power to assist the natural course of certain diseases to recovery, to shorten the duration of others, to arrest immediately still others, and to lessen and remove physical suffering. Inexorable death claims us all at last as victims, but his coming may be delayed, life lengthened, by the physician's art. The fact that quite a million of men, and hundreds of women, are engaged in the practice of medicine is proof that there is need for them.

Not only is the beneficence of medicine manifested in the cure of disease, but in its prevention. Sanitary science, preventive medicine, has rendered impossible those terrible epidemics which in past centuries ravaged the great centres of population. The sanitary state of a people is the criterion of their civilization.

While the most important sanitary work

belongs to health officers, to the medical members of sanitary boards, and to physicians to public institutions, yet in private practice the opportunities and the demand for this work are great. The office of family physician, that position held by the great majority of the profession, brings more happiness where the medical adviser is sincerely respected, trusted, loved, than public honors or great wealth, and offers abundant opportunities to prevent disease and to promote health. Moreover, how much the family physician can do to set lives right morally as well as physically; to allay social discord; to correct misunderstandings; to comfort the sorrowing; to give garments of praise for the spirit of heaviness; to rouse a slumbering will; sometimes to reclaim the profligate, enforcing the highest lessons of virtue from the penalties of disease; in short, to make men, women, and children healthier, happier, better! Oh, what infinite sympathy the physician learns to exercise,—the loving charity that must be his, forbearing harsh judgment and stern reproach, as he knows the frailties and the follies, the sins and the sorrows, of mortals!

Knowledge and love are necessary for this priestly calling. Hippocrates declared that ours was the most noble of arts, and that we must love man if we would exercise it aright.

Very justly, too, does he speak of the incompetent physicians of his day—who, of course, were relatively much more numerous then than now—as being like the figures which are introduced in tragedies; for, as they have the shape and dress and personal appearance of an actor, but are not actors, so, also, physicians are many in title but very few in reality.

The genius of medicine is heroic. The heroism of physicians has sometimes come from their love of science, but more frequently its source has been conscience and philanthropy. To them medicine is alike a code of morals and a mission of love. Doctors have inoculated themselves with the poison of specific disease, in some cases to study its effects, in others to allay the fears of hospital patients. On all the battle-fields, where masses of men are hurled against each other for the destruction of human life, the physician goes to save life. In hospitals, where contagious epidemics are rife, he makes his way, with never a thought of his own

safety if he can save others. When the pestilence rages in some of our Southern cities, and all who can flee from its terrors, physicians not only remain to combat the disease, but, if need be, a brave army of volunteers go to their help, laboring with them, and in many instances dying with them. The Church has its noble army of martyrs embalmed in perpetual loving remembrance. Medicine has its army of martyrs, whose names should never perish.

How many a surgeon, after performing tracheotomy in a case of diphtheria, has found the tube obstructed, his patient in peril of instant death, and has applied his mouth to the tube and removed the obstruction, saving his patient, it may be, but killing himself! When the Alabama was hopelessly disabled by the well-directed shots of the Kearsarge, the gallant surgeon, Lewellyn, got his wounded men in the only two boats left, but, though urged, refused to enter either of them, lest by overloading the safety of his patients might be imperilled, and went down with the ill-fated ship to sudden death, but to an immortal memory. It is needless to multiply cases: the history of medicine is full of instances where the physician has sacrificed himself for the good of others. Does any one suggest that Galen refused the request of Marcus Aurelius to accompany the army against the Germanic tribes, and that he ran away from Rome because of the plague? As to the first, possibly Galen had no taste for military surgery, and he wanted to finish in the quietness of his Roman home some one of the three or four hundred volumes he wrote. As to the second charge, running away from the plague, who knows but that was a campaign lie? The Greek doctors at Rome said all sorts of naughty things about Galen, scarcely scrupled at any means in their efforts to break him down, and, as probably some know, medical campaigns even in this day occasionally fail in always giving illustrations of the love of truth characteristic of George Washington.

Nevertheless, I am afraid the case against Galen* is too strong to admit of excuse: it can only be said that his conduct was

quite exceptional: the great majority of the profession meet disease rather than run away from it, risking their lives bravely and cheerfully if thereby they can save the lives of others.

Finally, the genius of medicine is reverent. This human body even in its dumb dissection speaks of power and wisdom that no merely human hypothesis can explain. Even conceding Haeckel's assertion of spontaneous generation as the beginning of life on this earth, and from this starting-point tracing the evolution of man, it is utterly inconceivable that such result should be accomplished without a directing mind. However, this opens too wide a discussion for the present occasion, though even Dr. Maudsley, in his recent work upon "Body and Will," says, in referring to the ovum, "in its nature is inscribed the architectural *plan or form* of its development," and one naturally asks, "Who made that plan?" It is vain to attempt to get rid of the notion that a product implies a producer, that houses and books, watches, and all wonderful pieces of machinery, never make themselves, but that they are the thoughts of men given expression and form; the common sense of men revolts at the suggestion that this world, with its flora and fauna, is such an infinitely improbable accident as could be made by a blind evolution. If, says Voltaire, a watch proves a watchmaker, a palace an architect, how is it that the universe does not demonstrate a supreme intelligence? What plant, what animal, what element, what star, does not bear the imprint of Him whom Plato called the eternal Geometer? It seems to me that the body of the least animal demonstrates a profoundness and unity of design which ought to enrapture us with admiration.

It is useless for any one to tell us that monism and evolution explain the mysteries of organic life, and of man, the highest in earth's creation; we must still believe in design, and in an intelligent designer, no matter how near to or remote from his work, no matter whether the chain of second causes has a dozen or a million links.

In the study of anatomy and physiology the evidences of design, of contrivance, are apparent to every thoughtful mind. Let me suggest from the almost infinite number a few: some of the veins in the human body have valves, others, as the visceral veins and the vena portarum, are

* Dechambre, in his interesting article upon *Diontologie*, in the "Dictionnaire Encyclopédique des Sciences Médicales," suggests that Galen went away to escape the hatred of the Greek doctors. The plague of lying lips may be worse than any bodily plague, and the pestilent breath of the slanderer, who tries to traduce any one who is more prominent than he, may be feared more than physical disease.

valveless, and the law, as stated by Marey, is that those veins do not have valves which are not subject to localized and intermittent pressure. This difference cannot result from chance. The walls of the left ventricle of the heart are much thicker than those of the right; but in the foetus the walls are of equal thickness: a study of the difference between the intra-uterine and extra-uterine circulation gives a reason for this difference. Why should the sebaceous glands of the foetus be so active that its body is more or less covered with fatty matter? Because, immersed in the fluid it is, there would be probably a dangerous osmosis from its blood, and it would present at birth a shrivelled, wrinkled appearance, like one's hands after having been kept in water for some time. In the latter part of pregnancy the fibrin undergoes a wonderful increase. Why? As the most important safeguard against post-partum hemorrhage. But I cannot continue these illustrations. Observe, think, in the course of your professional studies, and you will find abundant reason for faith in final causes.

The great founder of pathological anatomy, Morgagni, said, "The more I study anatomy, physiology, pathology, and pathological anatomy, the better I know God, the soul, and its immortality."

I believe that whether we take medicine as a study or as a practice, or the examples of the most illustrious men in the profession, we may justly say that the genius of medicine is profoundly reverent. "The grand voices of the profession unite with the grand voice of nature to affirm the existence and the attributes of a supreme legislator, that of our spiritual nature, of the faculties which distinguish it, and the certainty of our future destiny."

TRANSLATIONS.

A NEW URINARY TEST.—A solution of sulphodiabenzole under certain conditions gives a characteristic reaction with the urine in several pathological conditions. According to Ehrlich, the solution is prepared by acidifying 500 C.c. of water with 30-50 C.c. of pure sulphuric acid, and then adding sulph-anilinic acid until an excess remains undissolved, and then a few grains of nitrate of soda in solution in

water. In summer this solution may be kept for two or three days, while in winter it remains unaltered for five. If equal amounts of this reagent and urine from a case of typhoid fever are mixed, and then a little ammonia added, an intense scarlet red is developed. Normal urine does not produce this result. With the exception of pulmonary phthisis, this reaction is nearly always associated with the febrile state, while its appearance is especially constant in typhoid fever. Penzoldt has also experimented with this reagent, and has obtained the characteristic reaction in diabetic urine, even when the urine contains only one part per thousand of sugar.—*Centralb. f. d. Med. Wissen.*, August 4, 1883.

THE TREATMENT OF IRREDUCIBLE LUXATIONS.—In an interesting article on this subject, Rosenmeyer states that in most cases of irreducible luxation of the shoulder a high degree of usefulness may be restored to the joint by the constant and prolonged use of passive movements, massage, electricity, and warm baths; but when the mobility of the false joint is very slight, when great pain is caused by pressure on the nerve, or when the muscles are commencing to atrophy, arthrotomy is to be recommended. If the dislocation is of very old standing and extensive changes have taken place in the joint-socket, then resection of the head of the humerus should be performed. In the case of the elbow-joint, the results obtainable by passive movements, subcutaneous section of muscles, tendons, adhesions, etc., are far inferior to those which follow the resection of the joint.—*Centralblatt für Chirurgie*, August 4, 1883.

AN IMPORTANT MODIFICATION OF THE CATHETER.—In a communication to the *Berliner Klinische Wochenschrift*, F. Hüpeden calls attention to the danger of introducing infectious material into the bladder in catheterization, on account of a difficulty experienced in cleansing the ordinary catheter. The end of the catheter beyond the vesical opening forms a chamber for the accumulation of organic material, which is very difficult to dislodge. The recommendation is made that this end be filled up with metal, so that the danger of causing putrefactive changes in the residual urine in the bladder may be avoided, with ordinary care.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 20, 1883.

EDITORIAL.

OUR EDUCATIONAL NUMBER.

IT has long been the custom with some of the leading European medical journals to devote at least one issue annually to the systematic consideration of medical education, giving especial attention to the *personnel* of the various local schools, with such information as to lectures, fees, requirements, etc., as experience had shown was of the most interest to prospective or actual students. Such issues, known as the "students' number," or "educational number," have been much sought after on account of the important information which they contain. For this reason, of late years, similar reports have been published by some of our prominent American contemporaries, notably the *Boston Medical and Surgical Journal*, and recently the *New York Medical Journal*.

Realizing the impossibility of giving any just and satisfactory report of the eighty-nine regular medical colleges in the United States now in active operation, in the space at our command, or even of the sixty-three of them which have received the endorsement of the Illinois State Board of Health, we have in our present issue, without attempting a complete analysis of the subject of medical education in the United States, sought to improve the opportunity offered by the publication of the opening addresses at our two leading medical schools, to communicate some interesting information upon medical education sent us by some of our correspondents in a few only of the principal medical centres of this country.

The "students' number" of the *London Medical Record*, for September, contains

valuable material for reference concerning foreign medical schools, but much more information of the kind desired by those who wish to visit or study abroad may be found in a little work just published by William Wood & Co., entitled "A Guide to American Medical Students in Europe," written by Prof. Hun, of Albany. For those desiring a complete, systematic comparison of American medical schools we recommend a perusal of a pamphlet recently issued by the Illinois State Board of Health, which is a very valuable report on "Medical Education and the Regulation of the Practice of Medicine in the United States and Canada." It contains a summary of the laws governing the practice of medicine in the different States (alphabetically arranged for easy reference), together with well-digested information concerning the several colleges, which gives it permanent value. From it we learn that there are eighty-nine colleges now in existence in the United States, of which fifty-five exact a preliminary education as a condition of matriculation, and fifteen require attendance upon three full courses of lectures before graduation. There have been, also, several post-graduate schools started within a few years. These figures are not without encouragement to advocates of higher medical education.

We have departed somewhat in this issue from the usual arrangement, in order to publish simultaneously the opening lectures of Professors Stillé and Parvin. By the majority of our readers we believe that the able and earnest utterances of these distinguished teachers and authors, who have contributed their addresses to our pages, will be read with interest and advantage.

Medical education in this country of the colleges is now in a transition stage, but the promise of advancement is seen on every hand. In the inevitable struggle for life it is evident that, if the medical pro-

fession will but do its part, the survival of those colleges only that are most fit to be intrusted with the education of future physicians will be assured. We note with pleasure the evidences of real progress that are seen on every side.

THE ATTITUDE OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY TOWARDS WOMEN CANDIDATES.

THE Philadelphia County Medical Society, at its last business meeting, again rejected women candidates for membership, although they had been properly recommended by the Board of Censors. Inasmuch as the American Medical Association recognizes the right of women practitioners to belong to the county medical societies, and receives them as delegates at its annual sessions, it would certainly appear that the women physicians of Philadelphia County cannot lawfully be deprived in this manner of their right of representation and membership in the National Association, even to gratify the caprice or prejudice of certain individuals.

The Philadelphia County Medical Society, moreover, is a branch organization of, and subordinate to, the Pennsylvania State Medical Society, which admits women delegates: how, then, can it assume to represent *all* the regular medical practitioners of Philadelphia County when it persistently refuses to receive a certain proportion of them as members? The society of any county must either faithfully represent all regular physicians practising in its territory, or yield its place to a new society that will do so. It is acknowledged to be the duty of all regular physicians in good standing in the profession to belong to their county or district medical society, and if approved by the Censors *they have a right to admission*, and no man, or combination of men, can justly deny them this right. It has been con-

ceded that the candidates referred to were eligible under the By-Laws of the Society, and had a right to admission established both by precedent and by law: can the Society, therefore, afford to stultify itself by continuing its present attitude towards women candidates for membership?

NOTES FROM SPECIAL CORRESPONDENTS.

MEDICAL EDUCATION IN PHILADELPHIA.

THE problem of medical education, in which should be included the development and cultivation of those faculties required in the true physician, as well as the ordinary technical instruction, has been solved by Philadelphia schools better than any other medical colleges on the continent, if the number of graduates and the position filled by them in the American medical profession may be taken as a fair criterion. An examination into the present methods of teaching shows the result of an evolution which has steadily kept up with, if indeed now it is not really ahead of, the actual requirements of the community. In discussing heredity in his recent work, Francis Galton has stated it as a fact that our culture has advanced beyond our mental capacity; and we may certainly accept this as applied to medical culture, for the resources of the art of medicine are at the present day far beyond the capacity of the general public to understand or to appreciate. Without pursuing this subject, let us see how Philadelphia colleges are equipped and manned for their great and responsible work.

THE UNIVERSITY OF PENNSYLVANIA, MEDICAL DEPARTMENT.

The Department of Medicine of the College of Philadelphia, as it was originally called, was organized in 1765: it held its first Commencement in 1768, and has graduated classes each succeeding year, the total number of graduates now exceeding ten thousand.

The Faculty embraces eleven chairs, which are filled as follows:

FACULTY.

JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.
HENRY H. SMITH, M.D., Emeritus Professor of Surgery.
RICHARD A. F. PENROSE, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children.
ALFRED STILLÉ, M.D., LL.D., Professor of Theory and Practice of Medicine, and of Clinical Medicine.
D. HAYES AGNEW, M.D., LL.D., John Rhea Barton Professor of Surgery, and of Clinical Surgery.
WILLIAM PEPPER, M.D., LL.D., Professor of Clinical Medicine, also Provost of the University and *ex-officio* President.
WILLIAM GODDOLL, M.D., Professor of Clinical Gynecology.
JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy, and Secretary of the Faculty.

HORATIO C. WOOD, M.D., Professor of Materia Medica, Pharmacy, and General Therapeutics.
 THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry and Toxicology.
 JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery.
 HARRISON ALLEN, M.D., Professor of Physiology.

The Faculty is assisted by the following

DEMONSTRATORS AND LECTURERS.

CHARLES T. HUNTER, M.D., Demonstrator of Anatomy.
 ROLAND G. CURTIN, M.D., Lecturer on Physical Diagnosis.
 CHARLES K. MILLS, M.D., Lecturer on Mental Diseases and Electro-Therapeutics.
 J. HENRY C. SIMES, M.D., Demonstrator of Pathological Histology.
 ADOLPH W. MILLER, M.D., Lecturer on Materia Medica and Pharmacy.
 JOSEPH G. RICHARDSON, M.D., Demonstrator of Normal Histology.
 ROBERT MEADE SMITH, M.D., Demonstrator of Experimental Physiology.
 JOHN MARSHALL, M.D., Nat.Sc. D., Demonstrator of Practical Chemistry.
 BENJAMIN F. BAER, M.D., Demonstrator of Clinical Gynecology.
 ELLIOTT RICHARDSON, M.D., Lecturer on Clinical and Operative Obstetrics.
 EDWARD T. BRUEN, M.D., Demonstrator of Clinical Medicine.
 J. WILLIAM WHITE, M.D., Demonstrator of Surgery, and Lecturer on Venereal Diseases.
 HARRY R. WHARTON, M.D., Demonstrator of Clinical Surgery.
 JOHN B. DEEVER, M.D., Demonstrator of Osteology and Syndesmology.
 HENRY F. FORMAD, M.D., Demonstrator of Morbid Anatomy, Assistant Demonstrator of Pathological Histology, and Lecturer on Experimental Pathology.
 EDWARD T. REICHERT, M.D., Demonstrator of Experimental Therapeutics.

The course of instruction consists each year of a regular winter term of twenty-eight weeks' duration from the first Monday in October, which is obligatory, and a three weeks' preparatory course, and a spring course of eleven weeks, attendance upon which is not required. The curriculum is a graded one of three years' duration, but a four years' course is encouraged by the Faculty. Examinations are held at the end of each term. The requirements for admission are either the possession of a collegiate degree, a certificate from a high school, one from a board of managers of a county medical society, or a preliminary examination.* For graduation the candidate must be twenty-one years of age, of good moral character, and must have attended three full courses of lectures, passed the final examination, and written an accepted thesis. Tickets of other regular colleges are recognized, and graduates of other medical colleges are admitted to the three years' course without examination. Fees are five dollars for matriculation, paid once; and one hundred and fifty dollars for each course of lectures, including laboratory and dissection. No graduation fee.

Concerning the methods of study, we learn that during the first and second years much

of the student's time is occupied with practical work in the various laboratories, of chemistry, pharmacy, osteology, histology, and pathological histology, and in dissection; but throughout the second and third years he is required to attend the general medical and surgical clinics at the University and Philadelphia hospitals, while special clinical facilities are provided for the third year. In this year each student receives bedside instruction in clinical medicine and surgery, in physical diagnosis, and in gynecology. Opportunities are afforded for the practical study of diseases of the eye, ear, throat, and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose the third-year class is divided into sections of convenient size, each of which receives direct personal instruction in the various practical subjects above mentioned. In the fourth year, recently organized to go into operation with the session of 1883-84, and upon which attendance is voluntary, the instruction is almost purely practical in character.

A prominent feature of the present curriculum is systematic laboratory work in the fundamental medical sciences, as well as the personal teaching of each student in practical subjects of the greatest importance, such as physical diagnosis, clinical medicine, clinical surgery, and clinical gynecology. Students of the Medical Department of the University are now not only trained in the theory of medicine, but are also taught to perform chemical, pharmaceutical, and microscopical manipulations, to diagnose and treat medical and surgical diseases, and to recognize their post-mortem appearances. Exclusively didactic teaching has been universally abandoned in every branch of scientific and technical education, save the medical. Therefore, in establishing the present method, the trustees and the medical Faculty of the University felt that they were only adopting one which, in other departments of science, had produced the most valuable fruits. This result shows that, sooner or later, medical teaching in this country must be conformed to the system which has long been recognized as the only one suitable in the great medical centres of Europe.

The secretary of the Faculty, Prof. James Tyson, in reply to a request for information, kindly states that "the first-year class will certainly number one hundred and forty, which is larger than it has ever been since the inauguration of the three-years graded curriculum. Last year it numbered one hundred and fifteen. The year before we put on the admission examinations, it reached one hundred and thirty-seven; the session immediately following the admission examinations it fell to one hundred and ten; the next, to ninety-eight; the next, which was last year, it rose to one hundred and fifteen, and this

* Examinations for admission will be held annually hereafter during the first week in September in the cities of Boston, Mass., Rochester, N.Y., Raleigh, N.C., Columbia, Tenn., Atlanta, Ga., Mobile, Ala., Cincinnati, O., Chicago, Ill., Detroit, Mich., St. Louis, Mo., St. Paul, Minn., and San Francisco, Cal. This provision is made solely for the convenience of the student. He can, of course, be examined in Philadelphia if preferred.

year to one hundred and forty." He adds, "This is increase quite rapid enough, but, if it were not for the expenses of the course, I am sure there would be many more. The increasing of the term to seven months seems to have had no effect in throwing us back." A voluntary fourth-year class has been formed this year. The Towne Scientific School offers a good preparatory course for those who intend taking the medical degree.

The present course opened October 1, by an address by Prof. Stillé (see page 41); the term will end April 12, 1884.

A course has also been organized for post-graduate instruction.

The post-graduate instruction in connection with this University for the year 1883 is divided into three terms, as follows:

- (1) From January 2 to March 1, inclusive.
- (2) From April 9 to June 9, inclusive.
- (3) From October 29 to December 24, inclusive.

The following subjects are taught:

CLINICAL MEDICINE AND PHYSICAL DIAGNOSIS, by Prof. Pepper and Dr. Bruen.
 RENAL DISEASES, WITH PRACTICAL EXAMINATION OF URINE, by Prof. Tyson and Dr. Formad.
 NERVOUS DISEASES AND ELECTRO-THERAPEUTICS, by Prof. Wood and Dr. Mills.
 CLINICAL SURGERY, by Prof. Ashhurst and Dr. Wharton.
 OPHTHALMOLOGY, by Prof. Norris and Dr. Risley.
 DERMATOLOGY, by Prof. Duhring.
 OTOTOLOGY, by Prof. Strawbridge.
 GYNÆCOLOGY, by Prof. Goodell and Dr. Baer.
 OPERATIVE AND GENITO-URINARY SURGERY, WITH VENEREAL DISEASES, by Dr. White.
 CLINICAL AND OPERATIVE OBSTETRICS, by Dr. Elliott Richardson.
 LARYNGOLOGY, by Dr. Seiler.
 DISEASES OF CHILDREN, by Dr. Starr and Dr. Keating.

The teaching consists in bedside and dispensary lessons, in the practical examination of patients, and in the use of instruments of precision in the diagnosis and treatment of disease, to classes composed of graduates only. There are two classes of graduates to whom these courses are adapted: first, recent graduates, and second, those who have been for some years engaged in practice at a distance from medical centres. To the latter, the review afforded by such practical courses has been found peculiarly advantageous. From one to three hours weekly are devoted to these objects in each of the branches named. In clinical medicine one hour weekly will be devoted to a clinical conference.

In addition, the classes are permitted to attend the general and special clinics of the University and such didactic lectures as do not occur in the hours devoted to post-graduate instruction.

In addition to the above courses, the following are also given:

PRACTICAL PHYSIOLOGY, by Dr. ROBERT MEADE SMITH. Systematic Instruction in Experimental Physiology and Experimental Therapeutics, and the superintendence of Original Investigations.

MEDICAL CHEMISTRY, by Professor WORMLEY and Dr. MARSHALL. Including Toxicological and Medico-Legal Studies, Investigation of Blood-Stains, and Physiological Chemistry.

HISTOLOGY AND PATHOLOGY, by Dr. H. F. FORMAD.

Two courses: I. Normal and Pathological Histology, including Microscopic Technology; the opportunity of witnessing and making Post-mortem Examinations. Winter and spring months. II. Experimental Histology and Experimental Pathology.

The fees for this course can be ascertained on application. There is no expense attached to the course of preliminary lectures.

There is also an Auxiliary Department of Medicine, distinct from the others, which supplements the winter lectures by a course given during the spring months on certain collateral branches of science. Graduates of this school, after attendance upon two full courses of lectures and examination, receive the degree of Bachelor of Science.

Its Faculty consists of

JOHN J. REESE, A.M., M.D., Professor of Medical Jurisprudence and Toxicology.
 SAMUEL B. HOWELL, M.D., Professor of Mineralogy and Geology.
 JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.
 JOSEPH G. RICHARDSON, M.D., Professor of Hygiene.
 ANDREW J. PARKER, M.D., Ph.D., Professor of Comparative Anatomy and Zoology.

A Department of Philosophy also exists, with the following corps of instructors:

E. OTIS KENDALL, LL.D., Professor of Mathematics, and Dean of the Faculty.
 JOSEPH LEIDY, M.D., LL.D., Professor of Zoology.
 J. PETER LINSLEY, LL.D., Professor of Geology.
 J. I. CLARK HARE, LL.D., Professor of Law.
 REV. ROBERT E. THOMPSON, A.M., Professor of Political and Social Science.
 FREDERICK A. GENTH, Ph.D. (Marburg), Professor of Inorganic Chemistry.
 SAMUEL B. HOWELL, M.D., Assistant Professor of Geology.
 GEORGE F. BARKER, M.D., Professor of Physics.
 GEORGE A. KENIG, Ph.D. (Heidelberg), Professor of Mineralogy.
 HUGH A. CLARKE, Professor of Music.
 JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.
 THEODORE G. WORMLEY, M.D., LL.D., Professor of Organic Chemistry.
 ANDREW J. PARKER, M.D., Ph.D., Assistant Professor of Zoology.
 MORTON W. EASTON, Ph.D., Professor of Comparative Philology.
 ———— Professor of History,
 ———— Professor of Philosophy.

The Faculty of Philosophy has recently been organized for the supervision of advanced studies in the several departments of literature and science. The degree conferred upon recommendation of this Faculty is that of Doctor of Philosophy. The courses, which cover a period of at least two years, are open to graduates in any department of this or like institutions, and to others who can pass a satisfactory examination.

Among the other departments of the University may be mentioned a Dental Department, which is in a flourishing condition. Its Faculty consists of

CHARLES J. ESSIG, M.D., D.D.S., Professor of Mechanical Dentistry and Metallurgy.
 EDWIN T. DARBY, M.D., D.D.S., Professor of Operative Dentistry and Dental Histology.
 JAMES TRUMAN, D.D.S., Professor of Dental Pathology, Therapeutics, and Materia Medica.
 JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.
 HARRISON ALLEN, M.D., Professor of Physiology.
 THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry.
 ROBERT HUEY, D.D.S., Lecturer on Operative Dentistry.

The buildings of the University are located

upon elevated ground, and occupy a commanding position upon the west side of the Schuylkill River; they consist of the Departments of Arts and Towne Scientific School, in addition to the Medical and Dental buildings, and the laboratory, and a large general hospital.

THE JEFFERSON MEDICAL COLLEGE.

The Jefferson Medical College was originally the medical department of the Jefferson College at Canonsburg, Pennsylvania, which was a university, but is now defunct, the medical department having survived, and having succeeded to the rights and privileges of the parent institution. In conformity with this, it usually confers, at the annual Commencement, honorary degrees of Doctor of Laws or Doctor of Divinity through its board of trustees, but no honorary degrees in medicine are given. The first class was graduated from this institution in 1827, and others have been graduated each subsequent year. The total number of graduates is eight thousand one hundred and forty-three.

The curriculum includes an obligatory winter course, extending over twenty-six weeks, with a preliminary session of three weeks, and a spring course of eight weeks, attendance upon which is not required for graduation. The present course began October 1, with an introductory address by Prof. Parvin (see page 51). The Commencement will be held March 29, 1884, after the close of the lectures.

The Faculty of the college, with the subjects lectured upon, are as follows:

SAMUEL D. GROSS, M.D., LL.D., D.C.L. Oxon., LL.D. Cantab., Institutes and Practice of Surgery (Emeritus).
 ELLERSLIE WALLACE, M.D., Obstetrics and Diseases of Women and Children (Emeritus).
 J. M. DA COSTA, M.D., Practice of Medicine.
 WILLIAM H. PANCOAST, M.D., General, Descriptive, and Surgical Anatomy.
 ROBERT E. ROGERS, M.D., LL.D., Medical Chemistry and Toxicology.
 ROBERTS BARTHOLOW, M.D., LL.D., Materia Medica and General Therapeutics.
 HENRY C. CHAPMAN, M.D., Institutes of Medicine and Medical Jurisprudence.
 SAMUEL W. GROSS, M.D., Principles of Surgery and Clinical Surgery.
 JOHN H. BRINTON, M.D., Practice of Surgery and Clinical Surgery.
 THEOPHILUS PARVIN, M.D., LL.D., Obstetrics and Diseases of Women and Children.
 WILLIAM THOMSON, M.D., Honorary Professor of Ophthalmology.
 J. SOLIS COHEN, M.D., Honorary Professor of Laryngology.

DEMONSTRATORS.

WILLIAM S. FORBES, M.D., Demonstrator of Anatomy.
 J. EWING MEARS, M.D., Demonstrator of Surgery.
 G. MASON WARD, M.D., Demonstrator of Chemistry.
 MORRIS LONGSTRETH, M.D., Demonstrator of Pathological Anatomy, and Curator of the Museum.
 COCHRAN McCLELLAND, M.D., Demonstrator of Obstetrics.
 DAN E. HUGHES, M.D., Demonstrator of Clinical Medicine.
 S. MASON MCCOLLIN, M.D., Demonstrator of Pharmacy and Materia Medica.
 A. P. BRUBAKER, M.D., Demonstrator of Physiology and Histology.

The college buildings are situated on Tenth Street, between Chestnut and Walnut, and

comprise a medical hall, laboratory building, and hospital immediately adjacent. This central position gives to the school many advantages; among them an extensive choice of homes for the student convenient to the college, and proximity to the various business houses with which the student may have occasion to deal, as well as to the Pennsylvania Hospital.

The college building proper contains two large, well-arranged, and well-ventilated lecture-rooms. In the summer of 1881 the main building was remodelled by an extension of the front, by adding a new story, and by constructing new laboratory-rooms. By this extension of the front, the seating-capacity of each lecture-room has been materially increased, and by the addition of another story, new and more commodious dissecting-rooms have been constructed. Large and well-lighted rooms have been provided for practical obstetrics, and for the laboratory of experimental therapeutics and pharmacy, and another with special reference to microscopical work, and for a laboratory of pathological histology and morbid anatomy.

In this building are also contained the extensive and valuable anatomical, surgical, and pathological museums.

The laboratory building, immediately adjoining the medical hall, contains the physiological and chemical laboratories, fully equipped in the materials and instruments of study and research, and also the laboratory for the demonstration of operative and minor surgery.

No preliminary examination or technical proof of preparation for medical studies is exacted; but for graduation three years' study is necessary, with attendance upon two full courses of lectures. The candidate must also be twenty-one years of age, and be of good moral character. Students of dental colleges where full courses of five months' duration are given on anatomy, materia medica, physiology, and chemistry may become candidates after attendance on two such courses and one full course at this college, with another on surgery, practice of medicine, and obstetrics. A similar arrangement is made with students of colleges of pharmacy, except that among the additional branches named must be included anatomy and physiology. The expenses are—for matriculation, \$5; graduation, \$30 (each paid once); lectures, \$140 each session; with dissecting, \$10; other practical courses free. A reduction in the tickets for the course is made to graduates in dentistry and pharmacy.

Attendance upon a third term of lectures, though not obligatory, is encouraged by the Faculty, and is followed by a considerable proportion of the class. No charge is made for the extra course of lectures, and students are permitted to take a partial examination at the end of the second course, thus devoting

the final year to the practical branches exclusively.

A post-graduate course has been inaugurated during the past year, which includes five terms of seven weeks each, and extends from October to May inclusive.

The instructors and subjects taught by them respectively are as follows:

PROF. WILLIAM THOMPSON, Ophthalmology.
DRS. L. and CHARLES TURNBULL, Otolaryngology.
DRS. F. H. GETCHELL and J. EWING MEARS, Gynecology.
DR. J. C. WILSON, Physical Diagnosis, Diseases of the Chest.
DR. O. H. ALLIS, Orthopaedic Surgery.
DR. MORRIS LONGSTRETH, Normal and Pathological Histology.
DR. O. P. REX, Diseases of Children.
DR. J. T. ESKRIDGE, Nervous Diseases.
DRS. SAJOUS and JURIST, Laryngology.
DR. J. S. NEFF, Urinary Pathology.
DR. G. M. WARD, Medical Chemistry.
DR. S. M. MCCOLLIN, Practical Pharmacy.
DR. A. P. BRUBAKER, Experimental Physiology.
DR. J. V. SHOEMAKER, Dermatology.
DRS. A. K. MINICH and A. R. RYNEAR, Botany, Materia Medica, and Experimental Therapeutics.

All the courses will be demonstrative. The fees for each branch will range from \$10 to \$20.

THE MEDICO-CHIRURGICAL COLLEGE.

This school was organized in 1881, upon a plan which, if carried out in good faith, will go far towards elevating the standard of medical instruction and medical practice in this country. The course of instruction contains the following features: a winter's term, extending over twenty-four weeks; daily quizzes by the professors; a three years' graded course required.

The requirements for admission are a certificate of having graduated at a high school, or of having attended a classical seminary or college for at least a year, or having passed the examination of a board of examiners of a county medical society, or attendance upon the auxiliary literary term, the studies being elements of English literature and Latin, Greek, and natural science. For graduation, besides the usual requirements, the candidate must have attended three regular winter sessions, the last being in this college, and a special course of physical and practical instruction, also given at this college. The present course of lectures began October 1, and will extend twenty-four weeks.

The Faculty is constituted as follows:

GEORGE P. OLIVER, M.D., President.
WILLIAM S. JANNEY, M.D., Principles and Practice of Surgery and Clinical Surgery.
GEORGE E. STUBBS, M.D., Anatomy and Clinical Surgery.
CHARLES L. MITCHELL, Ph.D., M.D., Chemistry, Sanitary Science, and Medical Jurisprudence.
WILLIAM F. WAUGH, M.D., Principles and Practice of Medicine and Clinical Medicine.
ABRAHAM S. GERHARD, M.D., Physiology, Pathology, and Clinical Medicine.
WILLIAM S. STEWART, M.D. (Dean), Obstetrics, Gynecology, and Clinical Gynecology.
FRANK O. NAGLE, M.D., Materia Medica, Therapeutics, and Clinical Medicine.

THE WOMEN'S MEDICAL COLLEGE OF PENNSYLVANIA.

This college graduated its first class in 1851,

and has continued regularly since that time. The opening lecture of the present course was delivered by the Dean, Rachel L. Bodley, M.D., October 4, 1883. The Commencement will be held March 13, 1884.

The Faculty is constituted as follows:

RACHEL L. BODLEY, M.D., Professor of Chemistry and Toxicology.
CLARA MARSHALL, M.D., Professor of Materia Medica and General Therapeutics.
FRANCES EMILY WHITE, M.D., Professor of Physiology and Hygiene.
ANNA E. BROOMALL, M.D., Professor of Obstetrics.
JAMES B. WALKER, M.D., Professor of the Principles and Practice of Medicine.
HANNAH T. CROASDALE, M.D., Professor of Diseases of Women and Children.
WILLIAM H. PARISH, M.D., Professor of Anatomy.
WILLIAM W. KEEN, M.D., Professor of the Principles and Practice of Surgery.
J. GIBBONS HUNT, M.D., Professor of Histology and Microscopy.
C. NEWLIN PEIRCE, D.D.S., Professor of Dental Physiology and Pathology.
HORATIO C. WOOD, JR., M.D., Lecturer on Special Subjects.
EDWARD T. BRUEN, M.D., Lecturer on Pathology.
CHARLES K. MILLS, M.D., Lecturer on Nervous Diseases.
LOUIS A. DUHRING, M.D., Lecturer on Dermatology.
ALEXANDER W. MCCOY, M.D., Lecturer on Laryngoscopy and Rhinoscopy.
EMILIE B. DU BOIS, M.D., Demonstrator of Anatomy and Instructor in Materia Medica.
LUCIUS E. SAYRE, Ph.C., Demonstrator of Pharmacy.
HENRY F. FORMAN, M.D., Demonstrator of Pathology.
IDA E. RICHARDSON, M.D., Instructor in Practice of Medicine.
ANNA M. FULLERTON, M.D., Instructor in Obstetrics.
LENA V. INGRAHAM, M.D., Instructor in Surgery.

This college is contributing materially to the solution of two problems,—the proper qualification of women practitioners for the practice of medicine, and the greater one of higher medical education. It was among the first in the country to lengthen its winter session; it has also adopted an optional three-years graded course, and the Faculty earnestly recommends a four-years course, with annual examinations. The lectures are intended to be on a par with those given in the higher class of medical schools in this country, and unusual facilities are given for laboratory-work and original investigation. This college pursues the plan of giving weekly reviews, or quizzes, on the lectures by regularly appointed instructors throughout the winter course. These examinations constitute a part of the college preceptorship, and are free to every student.

Besides the winter session, a spring course of lectures, of ten weeks' duration, is given.

The requirements for graduation are similar to those of the Jefferson College. The expenses are—matriculation, \$5; lectures, \$105 (each course); demonstrator of anatomy, \$10; clinical, pathological, and pharmaceutical laboratories, each \$10. Graduation fee, \$30.

No information has been supplied by the Dean as to the size of the class.

PHILADELPHIA POLYCLINIC COLLEGE FOR STUDENTS IN MEDICINE.

This institution gives to graduates instruction in the recognized medical and surgical specialties, as well as in hygiene, clinical

chemistry, fracture-dressings, and operations on the cadaver. Its system of teaching is entirely demonstrative and clinical, as it must needs be to meet the wants of practitioners who resort to the medical centres to acquire facility in the use of instruments of precision. The sessions of six weeks enable physicians to leave their practice for but a short time and yet acquire familiarity with methods of diagnosis and treatment in the fields of special medicine. The dispensary of the college, and the out-patient or home department, together with the services of various hospitals, afford opportunities for accurate study of disease. The aim of the college is to supplement the work of institutions for undergraduates by giving those who have attained the position of physician practical knowledge such as can be obtained only by performing, under competent supervision, operations and manipulations on the living subject. Its pupils, after a prescribed course and examination, may acquire the diploma of Fellowship to the Philadelphia Polyclinic and College for Graduates in Medicine, which announces to the public that the holder is not only a Doctor of Medicine, but also acquainted with the advanced specialties of the present age.

The Faculty is constituted as follows:

THOMAS G. MORTON, M.D., Clinical, Operative, and Orthopædic Surgery.
J. SOLIS COHEN, M.D., Diseases of the Throat and Chest.
JOHN B. ROBERTS, M.D., Applied Anatomy and Operative Surgery.
CHARLES H. BURNETT, M.D., Diseases of the Ear.
CHARLES K. MILLS, M.D., Diseases of the Mind and Nervous System.
HENRY LEFFMANN, M.D., Clinical Chemistry and Hygiene.
ARTHUR VAN HARLINGEN, M.D., Diseases of the Skin.
EDWARD L. DUER, M.D., Obstetrics and Diseases of Women and Children.
GEORGE C. HARLAN, M.D., Diseases of the Eye.
J. HENRY C. SIMES, M.D., Genito-Urinary and Venereal Diseases.
FREDERICK P. HENRY, M.D., Pathology and Microscopy.
WILLIAM H. PARISH, M.D., Obstetrics and Diseases of Women and Children.

Philadelphia has about twenty hospitals, nine dispensaries, and thirty-eight other charitable institutions with which infirmaries are connected. Many special branches of medicine and surgery have their distinct institutions, as the Maternity, the Orthopædic, the Hospital for Nervous Diseases, Diseases of the Skin, for Children, etc. Graduates and advanced students desiring to pursue any special branch of medical science, or any of the recognized specialties, have, therefore, admirable opportunities afforded them in these various hospitals, and other public medical institutions.

NEW YORK.

MEDICAL PRACTICE AND MEDICAL TEACHING.

THE cool weather of the fall has again brought life and activity into professional circles here. The hibernating season of our principal practitioners has closed, and their

offices are again filled with patients just returned to the city and wishing to consult on trivial or chronic ills, concerning which they did not care to go to a strange or a country doctor. But reports are frequent of a sickly season out of town, and some of our rural fellows have reaped a rich harvest off the sojourners at our fashionable resorts. Every year a number of these physicians follow their patients to the city with intent to settle here; but the formidable array of shingles upon every block soon frightens most of them away, and those who do venture generally seek a less vigorous competition before the year is out.

The epidemic of typhoid—if, indeed, such did threaten us—has been averted, and new cases now are comparatively few, much to the disgust of the deodorizer, germicide, and disinfectant men, who have flooded the city with their circulars and made large sales on the strength of our Health Board's warning. Its subsidence is probably due to the opening of the flood-gates of our aqueduct and a more abundant supply of water turned on the city. It is broadly hinted that this is due to the appropriation for a new aqueduct having been secured, and that we might have had this increased supply all the time but for political greed. It is to be regretted that such means are necessary to secure such a needed improvement. One aqueduct is not enough for a city surrounded by salt water and containing a million and a half of people: hence it may be said, this time, the end justifies the means.

There is to be an operation in one of the hospitals here before long for extirpation of the kidney, which, judging from the looks of the patient, may add another to the recent successes of that brilliant operation.

The noted Dr. Shine, who for several years has been surgeon to the Elevated Railroads of this city, has been removed to an institution for the insane in this State, and his place filled by Dr. Matthew Field. Dr. Shine was never noted for either his temperance habits or professional etiquette, and many will be glad to see his place filled by a gentleman of broader views and more polished manners. But possibly the doctor's late disagreeableness was due to his mental affection, and his misfortune should call forth our most charitable sympathies.

Suicides are becoming more frequent in our medical ranks, three having occurred in this State during the past month. An unusual one comes from the West. A recent convert to the faith-cure in Missouri believed himself possessed of the power to cure disease by laying on of hands. After trying in vain to cure his aunt's sore eyes, he concluded himself a failure and cut his own throat. How can we persuade our Eastern quacks to imitate the Missourian?

The colleges have opened here with long

matriculation-lists. The University of New York has probably outstripped the other schools, some say on account of easy examinations, but, as an outsider, it would seem to me to be from improved accommodations and the increasing prominence and personal popularity of Dr. A. H. Loomis.

COLLEGE OF PHYSICIANS AND SURGEONS.

This is the Medical Department of Columbia College, located in the city of New York.

FACULTY.

ALONZO CLARK, M.D., LL.D. (President), Pathology and Practical Medicine (Emeritus).
WILLARD PARKER, M.D., LL.D., Principles and Practice of Surgery (Emeritus).
JOHN G. CURTIS, M.D. (Secretary), Physiology and Hygiene.
THOMAS MASTERS MARKOE, M.D., Principles of Surgery.
WILLIAM DETMOLD, M.D., Clinical and Military Surgery (Emeritus).
THEODORE GAILLARD THOMAS, M.D., Clinical Gynecology.
JOHN THOMAS METCALFE, M.D., Clinical Medicine (Emeritus).
HENRY BERTON SANDS, M.D., Practice of Surgery.
JAMES WOODS McLANE, M.D., Obstetrics, Gynecology, and Diseases of Children.
THOMAS TAUNTON SABINE, M.D., Anatomy.
CHARLES FREDERIC CHANDLER, Ph.D., Chemistry and Medical Jurisprudence.
EDWARD CURTIS, M.D., Materia Medica and Therapeutics.
FRANCIS DELAFIELD, M.D., Pathology and Practical Medicine.
WILLIAM HENRY DRAPER, M.D., Clinical Medicine.

CLINICAL PROFESSORS.

CORNELIUS RRA AGNEW, M.D., Diseases of the Eye and Ear.
ABRAHAM JACOB, M.D., Diseases of Children.
FERRISDEN NOTT OTIS, M.D., Venereal Diseases.
EDWARD CONSTANT SEGUIN, M.D., Diseases of the Mind and Nervous System.
GEORGE MOREWOOD LEFFERTS, M.D., Laryngoscopy and Diseases of the Throat.
WILLIAM TILLINGHAST BULL, M.D., Demonstrator of Anatomy.
GEORGE HENRY FOX, M.D., Diseases of the Skin.
THEOPHILE MITCHELL PRUDDEN, M.D., Director of the Physiological and Pathological Laboratory of the Alumni Association.
ROBERT FULTON WEIR, M.D., Surgery.
WILLIAM STEWART HALSTED, M.D., First Assistant Demonstrator of Anatomy.
FRANCIS HARTMAN MARKOE, M.D., Second Assistant Demonstrator of Anatomy.
GEORGE MONTGOMERY TUTTLE, M.D., Assistant to the Chair of Obstetrics.

The yearly course consists of but one session, of seven months' duration. The seventy-sixth course begins on Monday, October 1, 1883, and lasts until about the 1st of May, 1884.

Teaching by recitation forms a prominent feature of the course, the classes being conducted daily.

The fee for the course is \$40; for any single branch, \$7. A full course counts as time spent with a preceptor.

The fees for the session are the same as at the other large colleges. The dissecting-room is open during the whole course.

Requirements for Graduation.—In the usual statement requiring two full courses, it is specified that the two must not have begun during the same calendar year. Three courses are recommended,—the first including physics

and chemistry, anatomy, and physiology; the second, all the branches taught; the third, materia medica and therapeutics, pathology and practical medicine, surgery, obstetrics, and gynecology. The Faculty state that a majority of the students of the college follow this plan. A regular course in dissection is obligatory. Certificates of preceptorship are not accepted from homœopathic, eclectic, or other "irregular" practitioners, even if they are graduates of regular medical schools.

The examinations are in writing, the personality of the candidate not being known when the decision is given upon his papers.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

During the year the Faculty of this college have met with a serious loss in the death of Prof. Van Buren, who held the chair of surgery. In the spring Dr. Joseph W. Howe resigned his position as clinical professor of surgery. With these exceptions, there have been no noteworthy changes in the teaching corps, which is now constituted as follows:

FACULTY.

ISAAC E. TAYLOR, M.D. (President), Obstetrics and Diseases of Women and Children (Emeritus).
FORDYCE BARKER, M.D., LL.D., Clinical Midwifery and Diseases of Women.
BENJAMIN W. MCCREADY, M.D., Materia Medica and Therapeutics (Emeritus).
AUSTIN FLINT, M.D., LL.D., Principles and Practice of Medicine and Clinical Medicine.
FREDERIC S. DENNIS, M.D., Principles and Practice of Surgery and Clinical Surgery.
LEWIS A. SAYRE, M.D., Orthopædic Surgery and Clinical Surgery.
ALEXANDER B. MOTT, M.D., Clinical and Operative Surgery.
WILLIAM T. LUSK, M.D., Obstetrics and Diseases of Women and Children and Clinical Midwifery.
A. A. SMITH, M.D., Materia Medica and Therapeutics and Clinical Medicine.
AUSTIN FLINT, JR., M.D. (Secretary), Physiology and Physiological Anatomy.
JOSEPH D. BRYANT, M.D., Anatomy and Clinical Surgery and (Associate) Orthopædic Surgery.
R. OGDEN DOREMUS, M.D., LL.D., Chemistry and Toxicology.
EDWARD G. JANEWAY, M.D., Diseases of the Nervous System and Clinical Medicine and (Associate) Principles and Practice of Medicine.

PROFESSORS OF SPECIAL DEPARTMENTS.

HENRY D. NOYES, M.D., Ophthalmology and Otolaryngology.
EDWARD L. KEYES, M.D., Cutaneous and Genito-Urinary Diseases.
JOHN P. GRAY, M.D., LL.D., Psychological Medicine and Medical Jurisprudence.
WILLIAM H. WELCH, M.D., Pathological Anatomy and General Pathology, and Demonstrator of Anatomy.
J. LEWIS SMITH, M.D., Clinical Professor of Diseases of Children.
CHARLES A. DOREMUS, M.D., Ph.D., Professor Adjunct to the Chair of Chemistry and Toxicology.
BEVERLEY ROBINSON, M.D., Clinical Professor of Medicine.
FRANCIS H. BOSWORTH, M.D., Diseases of the Throat.

FACULTY FOR THE SPRING SESSION.

FREDERICK A. CASTLE, M.D., Pharmacology.
WILLIAM H. WELCH, M.D., Pathological Histology.
T. HERRING BURCHARD, M.D., Surgical Emergencies.
CHARLES S. BULL, M.D., Ophthalmology and Otolaryngology.
LEROY MILTON YALE, M.D., Diseases of the Joints.

The twenty-third regular session began on Wednesday, September 19, 1883, and will extend to the latter part of March, 1884. At its

close, the spring session begins, and lasts until about the middle of June.

Weekly examinations are held by the Faculty. These examinations are for the graduating class only, but all the students are allowed to be present. The examinations are free. In addition, special practical instruction is given to candidates for graduation by practical exercises in medicine, surgery, gynecology, ophthalmology, and otology. These exercises are designed especially for third-course students who have passed their final examinations in the elementary branches. They are extended, however, to all candidates for graduation, so far as practicable without preventing them from attending the didactic lectures.

The usual fees for the winter session are required.

For graduation, candidates must be twenty-one years of age; must have studied three years, after the age of eighteen, with a regular physician or regular physicians in good standing, inclusive of the time spent in attending medical lectures; must have attended two full courses of lectures, the last being in this college; must present certificates of at least one course of dissections at this or some other accredited college empowered to confer the degree of M.D.; must have proper testimonials of character, and must pass a satisfactory examination in each of the seven departments of instruction. Two full courses of lectures are absolutely required, and no period of practice is taken as an equivalent for one course.

Spring Session of Recitations and Lectures.

—The recitations are under the direction of Dr. H. Goldthwaite and Professors Dennis, Welch, and C. A. Doremus. The ticket to the recitations and lectures is \$40.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

Since the opening of the last annual session, Prof. J. W. S. Arnold has retired from the actual duties of the chair of physiology and histology, but retains a connection with the Faculty as professor emeritus of those branches. Professor Stimson succeeds Professor Arnold, and Dr. S. O. Van der Poel has been added to the Faculty as professor of public hygiene. A considerable addition has been made to the building, rendering it now, the Faculty state, the largest of its kind in the country. A dispensary has been added.

FACULTY.

ALFRED C. POST, M.D., LL.D. (President), Clinical Surgery (Emeritus).
CHARLES INSLEE PARDEE, M.D. (Dean) Otology.
J. W. S. ARNOLD, M.D., Physiology and Histology (Emeritus).
JOHN C. DRAPER, M.D., LL.D., Chemistry.
ALFRED L. LOONIS, M.D., Pathology and Practice of Medicine.
WILLIAM DARLING, M.D., LL.D., F.R.C.S., General and Descriptive Anatomy.

WILLIAM H. THOMSON, M.D., Materia Medica and Therapeutics, and Diseases of the Nervous System.
J. WILLISTON WRIGHT, M.D., Surgery.
WILLIAM M. POLK, M.D., Obstetrics and Diseases of Women and Children.
S. OAKLEY VAN DER POEL, M.D., LL.D., Public Hygiene.
LEWIS A. STIMSON, M.D., Physiology and Histology, Clinical Lecturer on Surgery.
STEPHEN SMITH, M.D., Clinical Surgery.
A. E. MACDONALD, LL.B., M.D., Medical Jurisprudence and Diseases of the Mind.
HERMAN KNAPP, M.D., Ophthalmology.
FANRUIL D. WEISSE, M.D., Practical and Surgical Anatomy.
R. A. WITTHAUS, M.D., Physiological Chemistry.
AMBROSE L. RANNEY, M.D., Curator of Museum.
JOSEPH E. WINTERS, M.D., Demonstrator of Anatomy.

ADJUNCT LECTURERS.

F. R. S. DRAKE, M.D., Practice of Medicine.
N. M. SHAPFER, M.D., Orthopaedic Surgery.
JOSEPH E. WINTERS, M.D., Diseases of Children.
WILLIAM C. JARVIS, M.D., Laryngology.
LAURENCE JOHNSON, M.D., Medical Botany.
P. A. MORROW, M.D., Dermatology.

The preliminary term begins on Wednesday, September 19, 1883, and extends to the beginning of the regular winter course, October 3. The spring session begins at the close of the winter course, in the middle of March, 1884, and continues for ten weeks. Only the winter course is obligatory.

Bedside and Laboratory Instruction.—The graduating class is divided into sections of about twenty-five each, which receive separate instruction for one or two hours daily throughout the term.

The fees for the winter session are the same as at the Bellevue Hospital Medical College.

The requirements for graduation are practically the same as at the other large colleges.

LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, NEW YORK.

The Faculty express the belief that they have succeeded better in practically uniting a medical school with a hospital than any other institution in this country, since all the instruction is given in the hospital building.

FACULTY.

SAMUEL G. ARMOR, M.D., LL.D. (Déan), Principles and Practice of Medicine and Clinical Medicine.
GEORGE W. PLYMPTON, M.D., Physics, Chemistry, and Toxicology.
CORYDON L. FORD, M.D., LL.D., Anatomy.
ALEXANDER J. C. SKENE, M.D., Diseases of Women.
JARVIS S. WIGHT, M.D. (Registrar), Operative and Clinical Surgery.
JOSEPH H. RAYMOND, M.D., Physiology and Sanitary Science.
EDWARD SEAMAN BUNKER, M.D., Histology and General Pathology.
JOHN D. RUSHMORE, M.D., Surgery.
JOHN A. MCCORKLE, M.D., Materia Medica, Therapeutics, and Clinical Medicine.
CHARLES JEWETT, M.D., Obstetrics and Diseases of Children.

The collegiate year is divided into two terms, the preliminary and the regular term. The elementary branches are taught in the former mainly by recitations, the students being divided into three grades. At present the graded course is optional. This preliminary term began September 19, 1883, and the regular term begins January 2, 1884. The annual Commencement takes place May 21, 1884.

Requirements for Graduation.—In addition to the usual requirements, practical anatomy to the extent of having dissected every region of the body, and laboratory courses in chemistry, histology, and pathology. The examination is both oral and in writing. No thesis is required.

Fees.—Yearly matriculation, \$5; preliminary term, \$40; regular term, \$100; demonstrator's ticket, \$5; graduation, \$25; practical chemistry, \$5.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.

FACULTY AND INSTRUCTORS.

ELIZABETH BLACKWELL, M.D., Hygiene (Emeritus).
JAMES R. LEAMING, M.D., Principles and Practice of Medicine (Emeritus).
EMILY BLACKWELL, M.D., Obstetrics and Gynecology.
GERARDUS H. WYNKOOP, M.D., Surgery.
MARY PUTNAM JACOBI, M.D., *Materia Medica* and Therapeutics.
EDWARD H. JAMES, M.D., Hygiene.
MARY WATTLES FAUNCE, M.D., Anatomy.
A. R. ROBINSON, M.D., Histology.
C. L. DANA, M.D., Physiology.
HENRY N. HEINEMAN, M.D., Principles and Practice of Medicine.
T. M. CHEESMAN, JR., M.D., Demonstrator.
S. M. ROBERTS, M.D. (Clinical), Diseases of Children.
D. M. STIMSON, M.D. (Clinical), Surgery.
E. B. BRONSON, M.D. (Clinical), Diseases of the Skin.
A. B. JUDSON, M.D., Lecturer on Orthopedic Surgery.
ELIZABETH M. CUSHIER, M.D., Lecturer Adjunct on Obstetrics.
R. W. AMIDON, M.D., Lecturer Adjunct on Therapeutics.
W. R. BIRDSALL, M.D., Lecturer on Nervous Diseases.
JOSEPHINE CHEVALIER, Lecturer on Chemistry, and Laboratory Instructor.
SARAH J. McNUTT, M.D., Instructor in Surgery.
MARY F. BISSILL, M.D., Instructor in Physiology.
JOSEPHINE WALTER, M.D., Instructor in Practice.
GRACE PECKHAM, M.D., Instructor in Obstetrics.

The college year consists of a session of eight months, beginning on the 1st of October and ending with the last day in May.

A preliminary examination is required of applicants who do not show a certificate from a literary institution. Students must attend three entire sessions, graded as follows: *first year*, anatomy, chemistry, physiology, *materia medica*, and practical work in the anatomical rooms and chemical laboratory; *second year*, the same, also histology, obstetrics, surgery, practice, therapeutics, and hygiene; *third year*, the latter departments continued, and practical medical work under the direction of the teachers, with clinical reports of cases attended. Students desiring to take a four-years course will confer with the secretary on matriculating, and be instructed how to proceed.

Requirements for Graduation.—Three winter sessions of lectures, with clinical instruction according to the course laid down; satisfactory examinations before the Faculty and Board of Examiners.

Fees.—Matriculation, \$5; demonstrator's ticket, \$10; professors' tickets, each \$15,—\$105; graduation, \$30.

NEW YORK POLYCLINIC.

The second year of the New York Polyclinic finds it in a flourishing condition. It is

like the preceding school in its essential features, except that didactic lectures form no part of the plan of instruction, as the school was organized with the special view of teaching only clinical medicine and surgery to physicians. The numbers in the various classes are limited, so that each can have an opportunity for personal investigation of patients. The Polyclinic is open all the year, each special course extending over six weeks. The fees are about the same as those of the Post-Graduate Medical School. The Faculty is as follows:

FACULTY.

JAMES R. LEAMING, M.D., Professor of Diseases of the Chest, President of the Faculty.
E. DARWIN HUDSON, JR., M.D., Professor of General Medicine.
JOHN H. RIPLEY, M.D., Professor of Diseases of Children.
LOUIS ELSBERG, M.D., Professor of Laryngology and Rhinology.
LONDON CARTER GRAY, M.D., Professor of Diseases of the Mind and Nervous System, and Electro-Therapy.
RICHARD C. BRANDIS, M.D., Professor of Laryngology, Rhinology, and Otolaryngology.
ANDREW R. ROBINSON, M.D., Professor of Dermatology.
EDWARD B. BRONSON, M.D., Professor of Dermatology.
JOHN A. WYETH, M.D., Professor of General and Genito-Urinary Surgery.
A. G. GERSTER, M.D., Professor of General and Genito-Urinary Surgery.
PAUL F. MUNDÉ, M.D., Professor of Gynecology.
W. GILL WYLLIE, M.D., Professor of Gynecology.
JAMES B. HUNTER, M.D., Professor of Gynecology.
EMIL GRUENING, M.D., Professor of Ophthalmology.
DAVID WEBSTER, M.D., Professor of Ophthalmology.
V. P. GIBNEY, M.D., Professor of Orthopedic Surgery.
WALTER R. GILLETTE, M.D., Professor of Obstetrics.
GEO. B. FOWLER, M.D., Instructor in Physiological Chemistry.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

This was the first institution of its kind in New York City, and was organized in June, 1882, the plan of instruction being based upon the post-graduate methods which have been successfully employed for many years in the medical centres of Europe. Clinical instruction constitutes a fundamental feature of the school. Systematic or didactic teaching holds a subordinate position. No under-graduates are admitted.

The curriculum embraces a regular and an intermediate term. The regular term began October 1, 1883, and will continue until June 2, 1884. The other term is intermediate, and will continue until October 6, 1884. Each course continues seven weeks, and a single one or any number may be taken. The fees for individual courses run from ten to twenty-five dollars each. No matriculation fee is required, and no degrees are conferred.

The Faculty is as follows:

FACULTY.

JAMES L. LITTLE, M.D., Professor of Clinical and Operative Surgery.
WILLIAM A. HAMMOND, M.D., Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity.
D. B. ST. JOHN ROOSA, M.D., LL.D., Professor of the Diseases of the Eye and Ear.
FREDERIC R. STURGIS, M.D., Professor of the Diseases of the Skin and Genito-Urinary Organs, and of Venereal Diseases.

CLINTON WAGNER, M.D., Professor of the Diseases of the Nose and Throat.
 THOMAS E. SATTERTHWAITHE, M.D., Professor of Pathology and General Medicine.
 MARY PUTNAM JACOBI, M.D., Professor of the Diseases of Children.
 BENJAMIN F. DAWSON, M.D., Professor of the Diseases of Women.
 EDWARD C. SPITZKA, M.D., Professor of the Anatomy and Physiology of the Nervous System.
 M. JOSIAH ROBERTS, M.D., Professor of Orthopædic Surgery and Mechanical Therapeutics.
 EDWARD L. PARTRIDGE, M.D., Professor of Obstetrics.
 CHARLES L. DANA, M.D., Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity.
 ALEXANDER J. C. SKENE, M.D., Professor of the Diseases of Women.
 ANDREW H. SMITH, M.D., Professor of Clinical Medicine and Therapeutics.

Our correspondent states further, concerning medical education in New York, that, in addition to the information to be obtained from the regular announcement of the medical colleges just given, it may safely be said that there exists a general sentiment in the profession that a license to practise should be required, and the standard of graduation certainly be elevated. This object can be obtained only by adopting one or more of three methods,—viz., first, by establishing a preliminary examination, to pass which will require on the part of the prospective medical student an evidence of a certain degree of mental training and of general education; second, by lengthening the term of the medical course, and adding to the requirements for graduation; third, by additional facilities for learning and improved methods of instruction.

While the medical colleges, as well as the profession in general, seem to appreciate the need for higher medical education, any means that may be suggested for attaining to this will necessarily meet with greater or less opposition. A college which draws most of its students from the larger cities, where a collegiate education is more usual, would be more likely to favor a strict preliminary examination, and demand a higher degree of proficiency in general education, than one which receives the majority of its recruits from the West and South and rural districts, where the standard of general education is lower. The matter of extending the time of study and attendance upon lectures seems to meet with general approval, but the college which takes the first step in this direction will probably do so at the expense of a diminished number of students at its halls, as was proved not long ago by the Bellevue Hospital Medical College, which, for this reason, has returned to its former requirements of only two years' attendance and one under a preceptor. Should all the medical colleges throughout the country determine upon a three years' course simultaneously, doubtless the New York colleges would heartily join in the move. Later a four years' course might possibly be adopted. It would probably prove some time before the step would be taken, based upon a demand therefor on the part of the majority of those

just entering upon their medical studies. Some years will probably pass by before a call for a preliminary collegiate education, especially instruction in the dead languages, as a requisite in entering upon the study of medicine, will meet with much favor, at least with a sufficient amount of favor to lead to its general adoption. The learning to be acquired at a well-regulated and well-founded medical college is so varied and so practical that even a large number of the general profession, as well as the college professors, seem to think that it sufficiently replaces any want not met by our excellent public schools. The colleges here certainly have all the main essentials for giving their students an excellent theoretical and practical medical education, and their greatest deficiency at present is an inability to make a three or four years' course compulsory. The opportunities for clinical, post-mortem, dissection, pathological, histological, and general laboratory instruction are very good. One feature introduced into the University last year seems to be propitiatory of excellent results,—viz., the dividing of the graduating class into sections, and giving separate instruction at the bedside in the hospital for one or two hours daily. Laboratory instruction is also made a special feature at this college. The classes at the three colleges have opened with about their usual fulness. From the Catalogue for 1883, the number of students at the College of Physicians and Surgeons was 543; the number of graduates, 125. Number in attendance at the University, 528; graduates, 163. Number in attendance at Bellevue, 467; graduates, 167. Of course, the percentage of rejections at the examination for the title of "M.D." cannot be exactly estimated from these figures, but it would seem that the requirements were not of a uniform standard, or else that the training was not equally perfect.

A graded course is optional, and usually is recommended, but it will not at all be likely to be made obligatory until the term shall have been lengthened. It seems to be regarded as of much less importance than the lengthening of the term.

The general sentiment of the medical profession in this city, and, so far as can be judged, throughout the State, is doubtless in favor of placing the power of granting a license to practise in the State in the hands of a State board of examiners; but as to the practicability of it, probably the most ardent supporters of such a project would admit that there is some doubt. The difficulty of keeping out politics, of maintaining harmony among the exclusive sects, etc., all constitute difficulties in the way of such a movement. The medical colleges would, no doubt, consider themselves fully as able to judge of their students' proficiency as any medical examining board, however constituted.

Whatever may be considered the best

means of bringing it about, whether by one sort of medical politics or another, whether by one code of ethics or another, or by no code, the times certainly point to a desire for a higher standard of medical education in the city and and State of New York.

MEDICAL EDUCATION IN BALTIMORE.

In the matter of medical education, Baltimore has made great progress during the past decade, not only in the number of colleges which have been organized and in the number of students attending the lectures given in them, but also in the higher standard of requirements insisted upon as qualifications for graduation. Several factors are concerned in the production of this desirable condition of things. In the first place, the general sentiment in favor of a more thorough education has had its effect; secondly, the honorable rivalry between the two leading schools has had a reciprocal effect in stimulating each to do its best in the endeavor to gain the lead over the other; and, finally, perhaps the largest share of this good effect is to be attributed to the influence of the Johns Hopkins University, our young but already renowned institution of learning.

JOHNS HOPKINS UNIVERSITY.

As the Johns Hopkins University promises to occupy a large share in the movement towards attaining the *highest* standard of medical as well as other education in this country, it will be appropriate to give an account of what is proposed to be done by this institution in furtherance of this object.

Seven years ago, Dr. John S. Billings, of the United States Army, delivered a course of lectures on the "History of Medicine" before the University, at the close of which he gave an outline of the requirements which probably would be demanded of those who sought the degree of M.D. in her halls. Three years ago, the first beginning was made towards the realization of the plan sketched by Dr. Billings, in the establishment of a special course preparatory to the professional study of medicine. This course comprises three years' study in certain branches of knowledge which most medical schools in this country seem to consider as non-existent, or, at least, of little benefit to the medical student. The candidate for this preparatory course is required to pass a preliminary examination in arithmetic, algebra to simple equations, involving not more than two unknown quantities, geometry, first three books of Euclid, or equivalent, plane trigonometry, and the use of logarithms. He will also be examined in easy Latin (Cæsar and Virgil) and the elements of Latin grammar. A knowledge of the mother tongue, so much neglected generally, will also be required, and a satisfactory test in spell-

ing, punctuation, and syntax must be passed. French, German, and drawing are also desirable, but not necessary at the preliminary. An exact, if not very extensive, knowledge of physical geography will be required of all candidates. After entrance the student will receive instruction in physics, chemistry, biology, English, German, and French, physical geography, history, logic, ethics, and psychology, with laboratory exercises in the first three subjects mentioned. The course on biology includes morphology, histology, physiology, human and comparative anatomy, and marine laboratory work. At the end of this course (three years), the student, if successful in his examinations, receives the degree of B.A. and is considered fitted to begin the study of medicine proper. This, according to Dr. Billings's schedule (whether this will be modified or not I am not aware), is to occupy a further four years, in the study of professional subjects proper, three of which are to be spent in practical work in the hospital, the doctor's laboratory. After these seven years' study, and several examinations in the mean while, the candidate may finally hope to append M.D. (Balt.) after his name, if his examinations in the various subjects prove satisfactory.

The fees for the course preparatory to the study of medicine are eighty dollars per year, to be paid in two instalments,—October and February. Twenty dollars must, in addition, be paid in the chemical and biological laboratories, for material and the use of apparatus.

The question may justly be asked, "Will many avail themselves of such opportunities?" As regular candidates for a degree, I fear not. Even Dr. Billings thought that the Johns Hopkins Medical School, in spite of its munificent endowment, would probably never graduate a class of more than twenty-five at a time. At present even this seems a sanguine view to take of it, for only very few students are taking the medical preparatory course in its entirety.

No account of the medical advantages of the Johns Hopkins School would be complete, however, without a reference to the magnificent hospital which is now in progress of building. As is probably known to all the readers of these pages, the late Mr. Hopkins, in making provision for the university which was to bear his name, directed that three and a half million dollars should be appropriated out of his estate for the construction of a charity hospital. The trustees have determined that in the essential requisites of a hospital this should be a model institution, and, as far as I am able to judge, this object will be attained. One of the common wards is now nearly completed, and an examination of it creates a strong desire to see the whole establishment finished at an early day. It will probably still be several years before the hospital is open for the reception of pa-

tients, though it is possible the year after next may see the opening of part of it.

Professor H. Newell Martin, the University professor of biology, has been appointed professor of physiology in the medical school, and Professor Ira Remsen, who occupies the chair of chemistry in the University, will teach the same branch to the medical students. Dr. Billings was tendered the chair of hygiene, but was compelled to decline on account of his absorbing duties in connection with the National Medical Library. It is said, however, that he will deliver a course of lectures on public hygiene before the University during the coming winter.

The indications seem to be that the diploma of M.D. from the Johns Hopkins University will indicate an amount of thorough professional knowledge approached by no similar institution in this country, and exceeded by none anywhere.

I am reminded, however, that however rapidly this good time may be coming, it has not yet arrived. The average medical student is still wanting in many of the graces of a polite education, and in not a few of the accomplishments actually requisite to study his text-books or listen to his lecturers with the greatest amount of profit. This brings me back to those institutions which are in our midst for the instruction of students in medicine alone, and which do not aim at the high standard of the Johns Hopkins, but modestly desire to turn out doctors who are able to diagnose a case of typhoid fever from one of pneumonia (and I'm sure this isn't always the easiest thing to do), and who know how to treat the case when the diagnosis is made.

UNIVERSITY OF MARYLAND.

Our oldest established medical school is the University of Maryland, which is now in its seventy-seventh session. Most of the physicians in this city are graduates of the University, and regard their old alma mater with much affection. Sometimes it has seemed to me that this worship was carried to excess, for many of the alumni are such bitter partisans that they are unable or unwilling to admit that any one can be a safe, reliable, or honest practitioner unless his credentials are derived from the *Academia Terra Mariae*. During the last few years the Faculty has been rejuvenated by the infusion of a quantity of healthy young blood, and it is now in pretty good condition, with the weak points carefully guarded by an energetic reserve, which will preserve it against dangers hereafter. In 1881 the University obtained power from the Legislature to add departments of dentistry and pharmacy. The dental department was established last year, its principal strength being derived from the old Baltimore College of Dental Surgery, whose Dean seceded to the University and assumed charge of the dental department of that school.

The clinical instruction at the University is good, the lecturers being progressive men and excellent teachers. The Faculty has control of a large general hospital and outdoor service, from which the clinical material is drawn.

The Faculty is composed of Professors George W. Miltenberger, Obstetrics; Richard M. Sherry, Principles and Practice of Medicine; Samuel C. Chew, Materia Medica, Therapeutics, and Throat and Chest Diseases; Frank Donaldson, Clinics on Throat and Chest; Wm. T. Howard, Diseases of Women and Children, and Clinical Medicine; J. J. Chisolm, Eye and Ear; Francis T. Miles, Physiology and Diseases of Nervous System; L. McLane Tiffany, Surgery; J. E. Michael, Anatomy and Clinical Surgery; I. E. Atkinson, Pathology and Clinical Dermatology; F. J. S. Gorgas, Principles of Dentistry, Dental Surgery, and Mechanism; J. H. Harris, Operative and Clinical Dentistry; Randolph Winslow, Demonstrator of Anatomy. Prof. Aiken, for about two generations Professor of Chemistry, has resigned, and his place has been temporarily filled by the appointment of Dr. R. Dorsey Coale, a graduate and associate of the Johns Hopkins University, as Lecturer on Chemistry. Prof. Tiffany is Dean of the medical and Prof. Gorgas of the dental department. The department of pharmacy has not yet been organized.

The requirements for graduation are—three years of study, two full courses of lectures, (three recommended), twenty-one years of age, a thesis or clinical report of cases. Fees—\$120 for the lecture tickets, \$5 for matriculation, \$10 for demonstrator's ticket. For beneficiary students the ticket to all the lectures is \$50. The graduation fee is \$30.

THE COLLEGE OF PHYSICIANS AND SURGEONS.

The College of Physicians and Surgeons, an offspring and successor to the Washington University, was organized in 1872, and is now the most prosperous school in the city. The elements of weakness that at first existed in the Faculty have been gradually weeded out, new facilities have been added, and few schools are better qualified to give thoroughly practical instruction to their students. The Faculty owns a large general hospital, a lying-in asylum endowed by the State, a woman's hospital near the college and rendering its material available for public clinics, and a large dispensary service. Physiological and chemical laboratories have been established, and, beginning with the present session, practical work in the laboratories will be an essential prerequisite to graduation. The school is fortunate in having for its Dean one of the most energetic and clever businessmen in the profession here, and it is largely owing to his untiring industry and tact that the school has attained to its present success. The Faculty is composed for the most part of

active, earnest, and thorough teachers. Their names are—Professors Thomas Opie, Obstetrics and Puerperal Diseases; John S. Lynch, Principles and Practice of Medicine, and Throat and Chest Diseases; T. S. Latimer, Physiology and Diseases of Children; A. F. Erich, Diseases of Women; A. Friedenwald, Eye and Ear; C. F. Bevan, Anatomy, Genito-Urinary and Orthopaedic Surgery; Oscar J. Coskery, Surgery; A. B. Arnold, Clinical Medicine and Diseases of Nervous System; Richard Gundry, Materia Medica, Therapeutics, and Mental Diseases; William Simon, Chemistry; George H. Rohé, Hygiene and Clinical Dermatology. The demonstrators are Drs. J. W. Chambers and J. H. Branham, of Anatomy, and W. D. Booker and H. J. Berkeley, of Physiology. Prof. Opie is the Dean.

The requirements for graduation are—three years' medical study, two full courses of lectures (three recommended), dissection during both terms, practical work in chemical and physiological laboratories. No thesis is demanded. The tickets of those schools holding their regular session in summer are not accepted at this school as equivalent to attendance on a full course of lectures. The full fees for the course are \$120. Privileged students—i.e., beneficiaries—are admitted on payment of \$55. The graduation fee is \$30.

WOMAN'S MEDICAL COLLEGE.

Last year a number of progressive young men, recognizing the importance of offering to women an opportunity to study medicine, and place the gentle sex here on an equal footing with their sisters in Philadelphia, New York, and Chicago, organized the Woman's Medical College of Baltimore. The success of the college has exceeded the anticipations of the organizers, and demonstrated the correctness of their belief that the movement started by them met an unquestionable demand. A hospital and dispensary are connected with the college, and the institution is honorably striving for the success it deserves. The Faculty is fairly well qualified for its work, and consists of Professors John S. Lynch, Principles and Practice of Medicine; B. B. Browne, Diseases of Women; T. A. Ashby, Obstetrics; Randolph Winslow, Surgery; E. F. Cordell, Materia Medica and Therapeutics; W. D. Booker, Physiology and Diseases of Children; R. H. Thomas, Throat and Chest Diseases; John G. Jay, Anatomy and Operative Surgery; Cameron Piggot, Lecturer on Chemistry; and Thomas P. McCormick, Demonstrator of Anatomy. Professor Booker is Dean.

The requirements are—a preliminary examination in the ordinary branches of an English common-school education, attendance on two full courses of lectures (three recommended), and on clinics and dissections. Fees, \$75 for full course of lectures. Matriculation, \$5. Dissection, \$10. Graduation, \$30.

BALTIMORE MEDICAL COLLEGE.

No notice of medical education in Baltimore would be complete without at least a passing reference to a peculiar aberration of the teaching instinct which resulted two years ago in the organization of what in its prospectus is termed the Baltimore Medical College, but which is generally spoken of by the profession as the "Christian College." The feature in the charter of this college which caused most comment was the provision that all the professors in the institution should likewise be professors of Christianity. At the introductory exercises of the present year the President is reported to have said that the "establishment of a pulpit is in contemplation,"—whatever that may mean. During the first two sessions the lectures were delivered to a class of men, women, and preachers. At present the women are excluded from the benefits of the teaching, and the vague reference to the pulpit, above mentioned, seems to indicate that the preachers will enjoy a monopoly of the instruction at an early day. This school, we believe, has not succeeded in winning the confidence of the profession of this city, as the controlling elements in its administration are not such as to inspire us with confidence in its reliability. The State Board of Health of West Virginia refuses to recognize its diplomas, and the Illinois State Board will probably take similar action when it shall be called upon for a decision.

The climatic and social conditions of Baltimore render it an attractive place for students to pass their period of pupillage. Board and lodging can be obtained at from three to six dollars per week. At the latter figure the accommodations are quite good,—better, in my experience, than in any other large city in the country.

Allow me to add a single suggestion. Baltimore is a bad place to begin practice. According to the census, there are more physicians to population in Maryland than in any other State in the Union.

MEDICAL EDUCATION IN BOSTON.

HARVARD UNIVERSITY, MEDICAL DEPARTMENT.

THE advance of medical education in America, and the opportunities for acquiring a thorough training for after-practice, are nowhere better illustrated than at the medical school of Harvard University. Each year, for the past decade, has seen some improvement. Acting upon the idea that preliminary training is necessary, the entrance-examination was instituted, which at first caused a diminution of students, only to result in increasing their number and quality year by year. The school this session begins its hundred-and-first year, with lectures in its

new building, erected entirely by the contributions of its friends, at a cost of three hundred thousand dollars. The building is centrally situated, in that section of Boston destined to remain the educational centre for years to come, having for its neighbors the Massachusetts Institute of Technology, the Museums of Fine Arts and Natural History, while close adjoining is the land recently given the city by the State for the purpose of a public library.

The building is central in respect to its clinical departments, being equidistant from the Massachusetts General, City, Children's, Free Women's Hospitals, and Boston Dispensary.

The students can find rooms, at moderate price, within easy walking-distance of the school.

The building itself is of plain brick, with sandstone trimmings, occupying one hundred and twenty-two feet on Boylston Street, ninety on Exeter Street. Its interior arrangements will be a source of great interest to medical men. Its facilities for thorough, careful observation in laboratory-work are unsurpassed in this country. As one enters the building, he is struck by the excellence of its architecture: it is that of a central hall, lighted from above, containing the stairway; about this rooms are arranged. On the left, as one enters, is the janitor's room, where letters and bundles for the students are received and arranged so that they will easily attract the attention. Continuing towards the rear of the building, one passes through an entry to a large, sunny room provided with desks and chairs, for the use of students as a reading-room; opening from this is a smoking-room, where conversation and smoking are allowed, thus, in its very foundation, providing for the comfort of the student. The remainder of the ground-floor is devoted to the library and room for the Faculty.

The second floor is devoted entirely to the physiological and chemical laboratories, and here provision has been made for students of advanced standing and those desiring an experimental knowledge of these subjects. Adjacent to the laboratories are the lecture-rooms for those subjects.

The third floor is given up to the lecture-rooms for anatomy and surgery. The seats are arranged on the plan of an amphitheatre, thus affording each person an unobstructed view. Here also is the Warren Museum, containing over seven thousand valuable specimens, to which the student has access, and on the west side two large, general lecture-rooms, where those topics not requiring demonstration are to be given.

On the fourth floor are the entrances to the amphitheatre for the student. Passing to the front of the building, one enters the pathological laboratory. Here provision is made for microscope-work, the room being well lighted from above and sides. In the

southeast corner of this floor is a small amphitheatre, to be used for operative courses on surgery and obstetrics, giving opportunities for special demonstration. In front of this, occupying the western side of the fourth floor, is the room for practical anatomy. This is well supplied with direct light by means of large sky-lights.

Having examined the building, what is necessary that one may use it as a student? The catalogue says,—

All candidates for admission, excepting those who have passed an examination for admission to Harvard College, must present a degree in Letters or Science from a recognized college or scientific school, or pass an examination, on the Monday preceding the last Wednesday in June or September, at 10 A.M., in the following subjects:

1. ENGLISH. Every candidate shall be required to write, legibly and correctly, an English composition of not less than two hundred words, and also to write English prose from dictation.
2. LATIN. The translation of easy Latin prose.
3. PHYSICS. A competent knowledge of Physics (such as may be obtained from Balfour Stewart's Elements of Physics).
4. ELECTIVE SUBJECT. Each candidate shall pass an approved examination in such one of the following branches as he may elect: French, German, the Elements of Algebra or of Plane Geometry, Botany.

Whenever the candidate shall give evidence of having passed a satisfactory examination in any of the above requirements either at Harvard College or at the Lawrence Scientific School, a subsequent examination in such subjects will not be demanded for his admission to the Medical School.

The examinations will be conducted in writing, and specimens of the papers used will be sent on application to the Secretary. In judging the work of the candidate, the spelling, grammar, and construction will be considered. Graduates in medicine will not be required to pass this examination on joining the school.

No student becomes a member of the school until he has registered his name with the Secretary of the Faculty.

Having satisfied ourselves of our ability to enter, who are to be our instructors if we conclude to be instructed by them? The two senior members of the Faculty until recently, Drs. Ellis and O. W. Holmes, have passed from active medical teaching. The Faculty that now is, comprises the following members:

FACULTY.

- CHARLES W. ELIOT, LL.D., President.
 CALVIN ELLIS, M.D., Emeritus Professor of Clinical Medicine.
 OLIVER W. HOLMES, M.D., LL.D., Emeritus Professor of Anatomy.
 HENRY J. BIGELOW, M.D., Emeritus Professor of Surgery.
 FRANCIS MINOT, M.D., Hersey Professor of the Theory and Practice of Physics.
 JOHN P. REYNOLDS, M.D., Professor of Obstetrics.
 HENRY W. WILLIAMS, M.D., Professor of Ophthalmology.
 DAVID W. CREEVER, M.D., Professor of Surgery.
 JAMES C. WHITE, M.D., Professor of Dermatology.
 ROBERT T. EDES, M.D., Professor of Materia Medica.
 HENRY P. BOWDITCH, M.D., Professor of Physiology, Dean.
 CHARLES F. FOLSOM, M.D., Assistant Professor of Mental Diseases.
 FREDERICK I. KNIGHT, M.D., Assistant Professor of Laryngology.
 CHARLES E. PORTER, M.D., Assistant Professor in Surgery.
 J. COLLINS WARREN, M.D., Assistant Professor in Surgery.
 REGINALD H. FITZ, M.D., Shattuck Professor of Pathological Anatomy.
 WILLIAM L. RICHARDSON, M.D., Assistant Professor of Obstetrics.
 THOMAS DWIGHT, M.D., Parkman Professor of Anatomy.
 EDWARD S. WOOD, M.D., Professor of Chemistry.
 WILLIAM H. BAKER, M.D., Assistant Professor of Gynecology.
 WILLIAM B. HILLS, M.D., Instructor in Chemistry.
 WILLIAM F. WHITNEY, M.D., Curator of the Anatomical Museum.

The course of instruction is arranged for three or four years, according as the student may elect, the Faculty strongly urging all those who can possibly do so to take the four-years course, having in view a prescribed course of four years. One who has been through a three-years course can readily see what an advantage it would be to be able to fill out in his fourth year those subjects which, from necessity, he was obliged to slight when the course was only three years. The amount of knowledge attempted in the third year is more than any student can digest: to persuade more students to remain four years is the present aim of the Faculty, and with this end in view a watchful care is kept that everything may be so provided as to induce to prolonged study and individual research, so that the fourth year shall be so attractive and evidently useful that students will desire to remain in the school from a conviction of advantages gained.

With this end in view, then, the course has been divided as follows:

FOUR-YEARS COURSE.

For the First Year.—Anatomy, Physiology, and General Chemistry.

For the Second Year.—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery.

For the Third Year.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

For the Fourth Year.—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine.

THREE-YEARS COURSE.

For the First Year.—Anatomy, Physiology, and General Chemistry.

For the Second Year.—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery.

For the Third Year.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Forensic Medicine.

HOSPITAL ADVANTAGES.

Besides these regular courses, special provision is made for the post-graduate course, in which the chances for clinical work are abundant.

The clinical advantages are such as are found only in large cities: to all the hospitals, both for clinical visits and to witness operations, the student has every opportunity.

At the Massachusetts General Hospital, nearly three thousand in its wards and twenty thousand in its out-patient department annually give excellent opportunity for that practical knowledge of disease which is so essential for the young physician. At the City Hospital, where four or five thousand are treated annually in its wards and twelve thousand in its out-patient department, ample opportunity is given for observing acute and contagious diseases: in the surgical wards,

recent injuries, fractures, and traumatic cases are of daily occurrence.

Operative surgery is to be seen at each hospital once a week, and, during a portion of the year, twice a week.

At the Massachusetts Charitable Eye and Ear Infirmary a large number of cases are treated each year, to all of which the student has access.

At the Boston Dispensary the number of patients is nearly twenty-seven thousand yearly, and here the student has an amount of auscultation and physical examination more than enough. All the physicians connected with the institution offer every courtesy to the student.

In the wards of this hospital, devoted exclusively to gynæcological cases, the student has the opportunity of seeing the various forms of uterine disease.

At the Massachusetts Hospital, which has so many varied surgical operations, the City Hospital, with its acute cases and accidents, the out-patient departments of both hospitals, with their opportunities for physical examination, the Hospital for Women, giving to those sufficiently advanced access for the study of gynæcology, the student has abundant illustration for his text-books.

CHICAGO.

ALMOST every Western town of any importance has its medical college. This city begins to count them by the dozen, and, if one may judge by the increasing numbers of young men in attendance each year, all appear to thrive. Indeed, medicine is now one of the easiest of the professions, and many hating hard work, mental or physical, purchase the right to a seat in the college lecture-room, and go through. With the closing days of last month our colleges renewed their activity: the attendance is larger than ever before, with the exception of one school, which shows a slight falling off. Each Faculty vies with the other in seeking favors, and promises increased facilities to patrons.

It is becoming fashionable in this city to advertise the operator and operations in surgery. Some invite the newspaper reporter to be present, others see to it that the paper is supplied with an entirely technical report of the case, and others go so far as to secure an announcement in advance, to be followed by an exhaustive description of the operation, in which the usual statements are made to the effect that the operation has been performed but twice before, and never till this time in this country. They usually close with the assurance that the operator and the patient are doing well.

Last week the popular mind was considerably agitated in this manner over the ligation of the common carotid.

The question of what shall be done with the city sewage is now pressing itself upon the attention of the authorities. That the present sewerage system is of a most imperfect and inadequate character is felt by all who have given the matter any serious consideration. The sewerage and the health of the city are so intimately connected that neglect of one is a sacrifice of the other. Our city does not profit by the experience of other cities; it does not begin where others left off, but begins where they began, and so gropes along, picking up a little sound knowledge at wide intervals and at great expense. The vast amount of filth flowing through the sewers into the lake, from whence we draw our water-supply, is with each year becoming a source of greater anxiety. There is a probability that we may adopt a slight modification of the system now in use in Paris, necessitating the purchase of about fifteen hundred acres of land not far from the city limits, or a system of intercepting sewers may be constructed by which the sewage would be passed rapidly through the canal and Illinois River to the Mississippi. In this connection it may be mentioned that the open grating placed over the man-holes to the sewers has in more than one instance been a direct source of disease to children and persons residing in the immediate vicinity. When the wind prevails from certain directions, the amount of gas escaping from those gratings is such as to compel residents near by to close windows and doors to shut out the stench. In some families it has produced nausea and vomiting and obscure and intractable disease.

On the evening of the 6th instant the Hahnemann Hospital was visited by fire, destroying the front portion, a building about forty by sixty-five feet. The excitement among the patients and officers ran high, but all escaped injury, and the fire was extinguished, saving the rear and principal part of the institution. The damage amounted to about ten thousand dollars, the building alone being insured. The loss will be considerable.

Dr. Jewell has resigned the professorship of nervous diseases in Chicago Medical College, and has been succeeded by Dr. Hay, late of Dubuque, Iowa.

CHICAGO, October 10, 1883.

CLEVELAND, OHIO.

[Our correspondent sends details about the colleges, which want of space prevents us from publishing. He gives his opinion of medical matters in this city as follows.—Ed. M. T.]

THERE are two regular medical colleges in Cleveland now in operation. The clinical advantages of each school are about the same, the Charity and City Hospitals being open to the students from each.

About two years ago, one of Cleveland's wealthy citizens proposed to the Faculty of each school that if they would unite and

form one, to be known as the "Western Reserve University Medical Department," he would give a considerable sum of money towards the erection of a fine college building. The offer was accepted, but in making up the Faculty Drs. Weber, Parker, Lowman, and Miller only were elected,—probably the ablest members of the Wooster school. The remaining ones felt so slighted at being left out in the cold, as it were, that they set about reorganizing a Faculty, being encouraged in such a step by the "University of Wooster," which institution claimed to have known nothing about their medical department consolidating with any other,—in fact, that the motto, "Non Anno sed Annis," inscribed over their portal, was just what they meant. As the matter stands, the Western Reserve medical department has the best Faculty and the largest number of students.

PROCEEDINGS OF SOCIETIES.

AMERICAN ACADEMY OF MEDICINE.

(Special report for the MEDICAL TIMES.)

THE Eighth Annual Meeting of the American Academy of Medicine was held in New York, at the New York Academy of Medicine, on Tuesday and Wednesday, October 9 and 10, 1883. The first session, on Tuesday afternoon, was called to order by the President, Dr. H. O. Marcy, of Boston, and prayer offered by Dr. Traill Green, of Easton. After the reading of the minutes of the meeting at Philadelphia last year, and the report of the Council, the Academy went into an election for Fellows. The following-named applicants, having been approved by the Council and by them recommended, were elected Fellows of the Academy: Dr. Z. B. Adams, Framingham, Mass.; Dr. E. B. Bronson, New York, N.Y.; Dr. A. Brown, Hellertown, Pa.; Dr. W. T. Clull, Schenectady, N.Y.; Dr. J. Corbin, Brooklyn, N.Y.; Dr. C. H. Crane, Surgeon-General, U.S.A., Washington, D.C.; Dr. F. L. Du Bois, Bridgeton, N.J.; Dr. E. L. Dunster, Ann Arbor, Mich.; Dr. J. Emerson, Detroit, Mich.; Dr. P. J. Farnsworth, Clinton, Iowa; Dr. F. H. Gerish, Portland, Me.; Dr. A. L. Gihon, Medical Director, U.S.N., Washington, D.C.; Dr. John Green, St. Louis, Mo.; Dr. E. Harts-horn, Philadelphia, Pa.; Dr. A. C. Kemper, Cincinnati, O.; Dr. R. P. Lincoln, New York, N.Y.; Dr. E. F. Mordough, Brooklyn, N.Y.; Dr. J. H. Patzki, U.S.A., St. Augustine, Fla.; Dr. Thomas J. Smith, Bridgeton, N.J.; Dr. J. A. Stewart, Baltimore, Md.; Dr. E. V. Stoddard, Rochester, N.Y.; Dr. J. K. Weaver, Norristown, Pa.; Dr. L. P. Walton, New York, N.Y.

Drs. T. Green, Steiner, and Bermingham were appointed as the nominating committee.

Dr. A. D. Rockwell, of New York, read a biographical sketch of his late associate, Dr. G. M. Beard, who, at the last meeting, was elected First Vice-President of the Academy. Dr. Rockwell entered more upon the inner life of his subject than his outward actions, trying to show what he *was* rather than what he did. Dr. Beard was a man of intense personality and self-reliance, amounting, in the minds of some, to excessive egotism. He was withal a courteous man, always ready to drop his work and listen to the conversation of others, whatever its worth. Perhaps the most striking characteristic was his humor, and out of this grew his reputation for eccentricity. A kindly disposition, full of tolerance and sympathy, avoiding polemics, who "never argued, but simply stated," containing so much that differed from other men that he was apt to be misjudged, but judged aright he was "an interesting, unique, and lovable personality." This memorial was ordered to be entered upon the minutes of the Academy.

Dr. Traill Green, of Easton, read a paper on "*The Imperfection of Technical Studies as a Means of Mental Culture.*" The central thought of this paper was that a man ought to know his tools and how to use them before the practical application of them to his life-work. When the natural sciences were born, physicians were true to their training, and assisted. If the study of the sciences be the *only* way to produce educated men, true education is of a very recent date, and all the worthies of a past age in philosophy and mathematics, in law and theology and medicine, were without a true education. The schools of technology are beginning to recognize the need of a general preparatory culture before entering upon technical studies, asserting that they are post-graduate schools. Allusion was made to the address of Charles Francis Adams, Jr., and quotations made, showing that false deductions had been drawn from it, and the necessity for a full and rounded development of the faculties as a preliminary to professional study was claimed to exist.

Dr. Benjamin Lee, of Philadelphia, read the next paper, having the title "*The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine.*" The paper consisted, first, of an historical study of the earlier botanists of the country, many of them being connected with the medical department of the University of Pennsylvania. Reference was made to the bibliography of American medical botany, the value of our native vegetable *materia medica* alluded to, and the almost utter ignorance of it on the part of physicians, leaving its development almost entirely to manufacturing pharmacists. There is an admirable opportunity given to country practitioners to study the indigenous vegetable *materia medica*, which is generally neglected because of ignorance. This study, if

not begun during student life, will probably be neglected afterwards. The action of the Medical Society of the State of Pennsylvania, in placing botany among the subjects of preliminary education, was noticed with approbation.

"*Is it Fair?*" was the rather fanciful title of a paper by Dr. Charles McIntire, Jr., of Easton. The sub-title explained that it was "A Study of the Comparative Political Position of the United States." Assuming that theology, law, and medicine were all of them learned professions, one would judge that equal legal protection would be given them; but examination shows that this is not so: that while the rule requires a special examination of the members of the other professions apart from their college or technical school examination, in medicine this is not the case; and to this condition the author appended the question, "Is it fair?" Suggestions as to the cause of this condition were to be found in the nature of the physician's calling and the indifference of the profession.

The last paper of the afternoon was by Medical Director Gihon, U.S.N., entitled "*The Higher Plane in Medicine.*"* In this paper the author pointed out some of the glaring defects of our present system of teaching, and demanded their correction.

The evening session was given to hearing the address of the President, Dr. Marcy, of Boston, who had selected as his subject "*The Recent Advances of Sanitary Science; the Relations of Micro-Organisms to Disease.*"

After expressing his thanks, and congratulating the Academy on its continuous prosperity, he entered upon the topic of his address. Differences of opinion have existed and will continue to exist, but, other things being equal, the better trained and better equipped soldiery will win. Rationalistic medicine exists alone without rivals, while *isms* or *pathies* will cease to be. There is a twofold duty for the physician, and the first is the prevention of disease, cure occupying a secondary place. Sanitation can hardly be called a science as yet. Much of what we deem modern was in use by those of the olden time. Hippocrates framed a wise maxim in "pure air, pure water, and a pure soil."

The discussion of the problems of life is not only instructive but fascinating. Mohammedanism, at least, is commendable in its provisions for cleanliness and careful living. The plagues of the Middle Ages would now be classed among the filth-diseases.

The best definition of health may perhaps be expressed in a hypothetical equilibrium between waste and repair exercised by the vital processes. The safe removal of the waste and worn-out material is one of the chief factors of sanitary science, and as the number of individuals gathered together increases, so does the complexity of the prob-

* This paper will appear in full in our next issue.—Ed. M. T.

A GOLD MEDAL
TO
W. H. SCHIEFFELIN & CO.
OF NEW YORK

"At the Holland International Exhibition at Amsterdam a GOLD MEDAL has just been awarded to Messrs. W. H. Schieffelin & Co. for their SOLUBLE PILLS AND GRANULES.

"This is a special distinction for their reliable preparations, as the award was made after a careful analysis of specimens of Messrs. Schieffelin's manufactured by prominent chemists."—*Medical Record*, New York, Oct. 22, 1883.

lem increase: hence this age of steam, by permitting greater aggregation of men, greatly enhances the difficulties of the problem.

The lecturer then considered the atmosphere and its impurities, more especially those products of organic decomposition, the so-called disease-germs and lower forms of life. Many of these are visible in the air, such as are revealed by a beam of light, as first shown to us by Tyndall.

The impurities in water, especially the lower forms of life, were next discussed, and particular attention was called to soil-pollution, and to the fact that after a while the soil does not purify. The importance of the study of the sources of septic poisoning was inferred from the fact that a greater number died in the army during the late war from zymotic diseases than from wounds. It will not do for physicians to be blind to these things, but the rather disseminate among the masses proper instruction of the cardinal virtues of right living, and use every means in our power for the enactment and enforcement of wise sanitary laws, so that rich and poor alike will be abundantly supplied with pure air and water and have their habitation upon an uncontaminated soil.

At the last meeting a resolution was adopted authorizing a subscription collation to be partaken at the close of the annual address, which was carried out at this time, greatly aiding in giving good fellowship and pleasant acquaintance among the Fellows.

On Wednesday morning the council recommended the following gentlemen for Fellowship: Dr. P. A. Morrow, New York; Dr. Herman Knapp, New York; Dr. W. S. Todd, Ridgefield, Conn. They also nominated to honorary Fellowship Dr. J. Marion Sims, of New York. These gentlemen were all elected.

The nominating committee presented the following report:

For President.—Dr. Benjamin Lee, Philadelphia.

For Vice-Presidents.—Dr. A. L. Gihon, U.S.N., Washington; Dr. Nathan Allen, Lowell, Massachusetts; Dr. G. F. Shradly, New York; Dr. E. J. Birmingham, New York.

For Secretary and Treasurer.—Dr. R. J. Duglison, Philadelphia.

For Assistant Secretary.—Dr. Charles McIntire, Jr., Easton, Pennsylvania.

Place of next meeting.—Baltimore, Maryland.

The report of the committee was received, and the several nominations were unanimously confirmed by ballot. The first paper of the morning was by Dr. L. S. Pilcher, of Brooklyn, on "*The Relations of Medical Journalism to Higher Medical Education in America.*" Dr. Pilcher discussed some of the papers of the previous day as a preface to his paper, since his ideas of the character of the "higher medical education" were not in harmony with those of the essayists of the day

previous. Continuing with his paper, the doctor called attention to the unrest, the fermentation that had been going on in the world of science for the last twenty-five years, in which medicine sympathized and with which she kept pace. The outcome of this was an elevation of the education of the average physician. Medical journals collected, assorted, utilized the material gathered by this investigation. The character of medical teaching has thus been revolutionized, and medical journals supplement the studies of the schools and constantly incite to a higher standard of medical education. The conclusions of Dr. Pilcher were reviewed and criticised by Drs. Steiner, Gihon, and Sibbet.

The next paper was by Dr. J. Cheston Morris, of Philadelphia, on the "*Milk-Supply in Large Cities.*" in which he spoke first of the importance of milk as an article of diet, the impossibility of improving upon its flavor or value by any artificial methods, and the constant necessity of having it absolutely pure and sweet. The present accepted plans of supplying cities with milk, and the difficulties encountered in delivering the milk in a good condition and of full strength, were discussed. The remedy proposed was to put the milk in bottles or jars at the farm, after carefully cooling the milk and stirring, so that the cream may be evenly mixed. These jars are sealed and sent in this way to the consumers. This method is no longer a mere fancy, but is practically and profitably worked by several farms near different cities. The importance of the subject may be determined when Philadelphia alone is estimated to expend about \$100,000 a day for milk.

"*The Exact Value of the Electrolytic Method*" was the title of a paper read by Dr. A. D. Rockwell, in which the author, by a careful examination of the effects produced by electrolysis upon the various organs and pathological conditions, was able to formulate to what use electrolysis might be put.

Dr. Duglison then read the Annual Report of the Committee on Laws of Medical Practice in the United States and Canada. This committee has been at work for some time upon this subject, reporting yearly the changes that have taken place. The general tone of the report was one of encouragement. Our legislators are awakening to the fact that a physician should have certain qualifications for the calling he professes.

"*The Importance of Cleanliness in Surgical Operations*" was the title given to papers submitted by Dr. R. S. Sutton to the Academy and the American Gynecological Society, the papers being alike in name only. The doctor is inclined to the opinion that the evil influence of bacteria is exaggerated; many of them are harmless; but some are capable of causing septic poisoning, and, as in practice we cannot differentiate between them, all germs must be fought. This he prefers to do

by great care to secure absolute cleanliness. Indeed, the great good obtained by Listerism is brought about by the great cleanliness produced by the method. In the absence of Dr. Sutton, this paper was read for him by the Assistant Secretary.

For the same reason, Dr. Keyser read the paper submitted by Dr. Lewis P. Bush, entitled "*Some Thoughts on Vaccination.*" The objections to vaccination were thought to be frequently due to an imperfect or spurious vaccination being depended upon as protective, and because it failed to grant protection the whole plan was denounced. On this account, possibly, it would be best to have public vaccinators, who would be careful about the results. The disease smallpox is so loathsome in itself, entails such suffering and neglect upon those who are afflicted, and, should they recover, is so apt to disfigure them for life, that every means should be taken to put properly before the people the value and utility of vaccination thoroughly and properly done.

At the conclusion of the papers, Dr. Marcy pronounced his valedictory in a few but eloquent words, and appointed Dr. Keyser to conduct the President-elect to the chair.

Dr. Lee, in taking the chair, took refuge in the proverb "Still waters run deep," and, if his words were few, he felt deeply grateful for the honor conferred. He then appointed as additional members of council Dr. C. C. Bombaugh, of Baltimore; William Elmer, Jr., of Trenton; and J. Cheston Morris, of Philadelphia.

The Academy then brought its eighth session to a close, the attendance being larger than ever before, with an interest maintained until the hour of adjournment.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 10, 1883, George F. Shrady, M.D., President, in the chair.

The minutes of the previous meeting were read by the Secretary, and approved.

AMPUTATION OF THE KNEE.

Dr. Wackenheimer presented the parts entering into the formation of the knee-joint, removed by amputation recently from a patient suffering from arthritis. The patient, aged 52 years, two months before the operation observed slight swelling of the knee, which increased rapidly during the last three weeks. But very little pain was present. The examination of the specimen after amputation at the thigh showed that there seemed to have been recent hæmatoma; the head of the tibia and fibula had undergone rarefaction; pus was absent. The patient had been able to stand on the leg up to the time of the operation. He was now in good health; the temperature and pulse had fallen to normal.

The President referred to two cases which recently came under his observation, which fell under the head of the spinal arthropathies, and in which pain was scarcely a noticeable symptom. One of the patients was able to walk with perfect ease, except for twisting about of the affected knee.

OPERATION FOR STRANGULATED INGUINAL HERNIA.

Dr. Elliot presented the specimen, which was obtained from a young man, aged 19 years, who began to suffer from symptoms of hernial strangulation two days previous to his entrance into the hospital. Attempts at taxis had proved unsuccessful. During the past twenty-four hours stercoraceous vomiting had been present; the patient was unconscious; there were symptoms of partial collapse. The parts were found partially adherent to the walls of the sac, but not apparently gangrenous. But it was considered best not to return them to the abdominal cavity. The patient did not regain consciousness, but died within a day after the operation. There was found some clear serum in the peritoneal cavity, but no positive signs of active inflammation. The points of interest in the case were the descent of a congenital inguinal hernia and strangulation for the first time at the age of nineteen years; the fatal result without signs of active peritonitis; the possibility of recovery had the tumor been reduced.

Dr. Carpenter once operated for a strangulated direct inguinal hernia of five days' standing, or longer. The patient, however, did not recover from the shock. The tumor had been returned, although the propriety of doing so had been questioned. It was of interest to note that the physician who first saw the patient, taking the case to be one of indirect inguinal hernia, used taxis, with the result simply of increasing the size of the tumor by pushing the gut up the inguinal canal.

INOCULATION OF SCARLATINA POISON IN HORSES AND CHILDREN.

Dr. Peters reported progress from the committee appointed to investigate the question of scarlatina in horses. The report gave the results of attempts at inoculation made by Dr. Sickler. Two colts and one calf were experimented upon. The symptoms, developed with more or less uniformity, were the following: redness of the pharyngeal mucous membrane, swelling of the glands of the neck, rise of temperature and increased pulse-rate, discharge from the nose, eruption, restlessness. Seven children, all in families in which scarlatina existed, were inoculated either by introduction of blood or scarlatinal scales from a patient sick with scarlet fever, or by inhalation of the scarlatinal exudations. The result was rapid development of scarlet fever in all but one case, in which a few days first elapsed. The symptoms were mild, and

in but two cases did albuminuria appear. All recovered. Scarlet fever in horses was not generally recognized by veterinary surgeons in New York, but the disease was described in veterinary books, and was traced back as long ago as it was known to exist in man. It was not improbable that man first took it from the lower animals. A certain form of pink-eye, in which pinkness of the eye, however, was by no means uniform, was considered by Dr. Peters to be scarlet fever. In cases of doubtful origin in children, the possibility of the disease having been brought home in the clothing of the men from the livery-stables was not to be overlooked.

CEREBRAL SOFTENING.

Dr. Ferguson presented the brain, the seat of extensive softening in the right hemisphere, removed from a woman, 65 years of age, who had suddenly developed paralysis of the left side of the body, with difficulty in speech, after an extensive burn upon the chest, arms, and legs, from boiling water. The temperature, pulse, and respiration rose, and she died some hours after the injury. She was said never to have been sick before. The left ventricle was found hypertrophied and moderately dilated; the kidneys, the seat of extensive diffuse nephritis. The right side of the brain was extensively softened, especially in the parietal region; the ventricles dilated. The left hemisphere was normal. The tongue had also deviated to the left. Notwithstanding the extent of the kidney-lesion and the presence of numerous hyaline, granular, and fatty casts in the tubules, examination of the urine had proved entirely negative. There was no sign of embolism, thrombosis, or of hemorrhage, except very slight in the ganglia. The case had occurred too recently to admit of careful microscopic examination.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

At a meeting of the profession called for the purpose, September 25, 1883, at the hall of the Academy of Medicine, New York, the American Climatological Association was organized, and forty names were enrolled as members.

The objects of the Association were stated to be the study of diseases of the respiratory organs, together with the influence of climate thereon.

A committee consisting of Dr. Tyndale, of New York, Dr. Bruen, of Philadelphia, and Dr. Garland, of Boston, was authorized to act temporarily as a Board of Censors, and to draft a constitution and by-laws, and submit the same at the next meeting.

The following officers were elected:

President, Dr. A. L. Loomis, New York.

First Vice-President, Dr. F. J. Knight, Boston.

Second Vice-President, Dr. W. H. Geddings, Arkansas.

Secretary and Treasurer, Dr. J. B. Walker, Philadelphia.

It was decided to hold the first annual meeting in 1884 at Washington either immediately before or after the meeting of the American Medical Association, for which the following were appointed a Committee of Arrangements: Drs. Alex. Y. P. Garnett, Washington, D.C.; F. Donaldson, Baltimore; F. Bosworth, New York; L. Shurley, Detroit; J. C. Wilson, Philadelphia.

REVIEWS AND BOOK NOTICES.

THE PHYSIOLOGICAL FACTOR IN DIAGNOSIS. A WORK FOR YOUNG PRACTITIONERS. By J. MILNER FOTHERGILL, M.D., Physician to the City of London Hospital for Diseases of the Chest (Victoria Park), etc., etc. New York, William Wood & Co., 1883. pp. 251.

To those who expect to find this volume anything more than an excellent manual of symptomatology, abounding in facts of value well set forth in the familiar style of the author, the somewhat striking title will prove misleading. Nevertheless it is a book to buy and read. A more formal arrangement and a more methodical treatment of some of the subjects would have enhanced its value as a work of reference. It is fresh, crisp, and suggestive on every page, in every line. In thirteen fluent chapters the author discusses the sick man and his sickness, and how the young practitioner is to obtain a useful knowledge of both. The (1) history of the family and the individual, (2) the external appearance, (3) the tongue, (4) the respiration, (5) the pulse, (6) the alimentary canal, (7) the urine, (8) the reproductive organs, (9) the temperature, (10) motor and sensory disorders, (11) the patient's sensations, (12) the patient in his bedroom, are treated of in the first twelve chapters in an instructive and often amusing way. The concluding chapter is wholly personal, and in it Dr. Fothergill disarms criticism of the rapidity with which his books appear, by promising for the future to devote his time to the revision and enlargement of his works and to getting out new editions. The present volume gives us the impression of having been "made" in haste. There are occasional inelegant expressions and some inaccuracy. In reading proof, *Torcula Hierophili* (p. 213) has been overlooked.

We cannot too heartily commend Dr. Fothergill's oft-repeated direction to diagnose the patient as well as the disease, which is in truth the watchword of the book, just as elsewhere he has manfully insisted that to treat the patient rather than the disease is the object of therapeutics.

J. C. W.

THE ROLLER BANDAGE. By WILLIAM BARTON HOPKINS, M.D., Assistant Demonstrator of Surgery in the University of Pennsylvania, etc. Small 8vo, 95 pages. J. B. Lippincott & Co., Philadelphia.

In the preface of this little work the author states that "each bandage was applied to a living model, and whenever the roller pursued a course which the author has found in his association with students was the cause of uncertainty, it was at once photographed." "From these photographs accurate drawings were made." This plan has relieved the book of the stereotyped plates which have done duty for so many years in works on bandaging, and gives an appearance of newness which is refreshing. With a few exceptions, the turns of the different bandages are distinctly portrayed by the method of illustration employed. In the drawing representing the application of Velpeau's bandage the hand is placed on the summit of the sound shoulder, instead of upon the acromion, as directed by Velpeau in his description of the bandage. The directions given for application of the bandages are clear and specific, and will be easily comprehended, we think, by students,—to whom the book will be a guide in the surgical room. J. E. M.

MISCELLANY.

DR. HENRY LEFFMANN, Professor of Chemistry in the Philadelphia Polyclinic, has been elected to the chair of chemistry and metallurgy in the Pennsylvania Dental College, which had been rendered vacant by the death of Prof. T. L. Buckingham.

DEATH OF ONE OF THE FRENCH CHOLERA COMMISSIONERS.—Dr. Thuillier, a member of the Pasteur Scientific Mission, died at Alexandria on Tuesday, the 18th ult., of cholera.

NOTES AND QUERIES.

THE LAST OF THE BARBED-WIRE BEEF-SKEWER.

MR. EDITOR.—At a recent meeting of the Philadelphia County Medical Society, Dr. W. R. D. Blackwood read a paper entitled "Remarks on the Chicago Beef Wire Skewer." This was also published in the *Medical Times*, October 6, 1883. Briefly speaking, the article may be divided into three paragraphs: the first and third treat of the mode of preparation, the shipment, and the superior excellence of the meat of a certain dealer. About this I have nothing to say, as it has no bearing on the matter of which I shall treat; but the second paragraph contains remarks which need to be referred to.

Some months ago, my attention was first attracted to the beef-skewers in question by several cases which came under my care, which was soon followed by a publication warning meat-consumers of this danger. The allegation that this was a sensational attack made on this variety of beef in the interest of a "clique of butchers" is not recognized, as I have not had the pleasure of being acquainted with such a body. This matter was at once thoroughly investigated by Messrs. Abner A. Jewitt & Co., wholesale dealers in Chicago dressed

beef, of this city. These gentlemen were so thoroughly convinced that it was *not* the work of a clique, also of the importance of preventing further danger from these skewers, that they at once ordered them to be removed and their use discontinued. This action certainly demonstrated that the danger was not a supposed one, but an actual one. As was the custom with exporters of Western beef, one barbed skewer was used on each quarter of beef to fasten the tag; this, of course, reduced the danger to a minimum; but when it is considered that a number of retail meat-dealers were also in the habit of using this variety of meat-skewer to fasten their business cards on every rib-roast, etc., that left their establishments, it can be understood that the danger was manifestly increased. It is needless here to speak of the great variety of foreign bodies which may find or have already accidentally found their way into the upper air and alimentary passages; the latest was the Chicago beef wire skewer, which we need no longer fear. Since the publication of my paper calling attention to the subject, its use has been discontinued, and it is now a thing of the past.

Very respectfully,

JOHN S. MILLER, M.D.,
Assistant in the Laryngological Department,
Jefferson Medical College Hospital.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 6 TO OCTOBER 13, 1883.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability. Paragraph 7, S. O. 231, A. G. O., October 8, 1883.

SWIFT, EBENEZER, LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—Under the provisions of Section 1 of the act of Congress approved June 30, 1882, is, by operation of law, this day retired from active service, and will proceed to his home. Paragraph 4, S. O. 231, A. G. O., October 8, 1883.

HARTSUFF, ALBERT, MAJOR AND SURGEON.—Granted leave of absence for fifteen days. Paragraph 2, S. O. 205, Department of the Missouri, October 6, 1883.

MEACHAM, FRANK, MAJOR AND SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

CRONKHITE, H. M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort D. A. Russell, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

WEISEL, DANIEL, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Fred Steele, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

ARTHUR, W. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Washakie, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM OCTOBER 6 TO OCTOBER 13, 1883.

Surgeon F. L. DU BOIS detached from Naval Rendezvous, Philadelphia, and ordered as member of the Medical Examining Board, Philadelphia.

P. A. Surgeon CHARLES W. RUSH detached from the Naval Hospital, New York, and ordered to the receiving-ship "Colorado," New York.

P. A. Surgeon M. D. JONES detached from the Naval Hospital, Washington, D.C., and ordered to the Naval Hospital, New York.

P. A. Surgeon RICHARD ASHBIDGE detached from the Naval Academy, and ordered to the U.S. steam-ship "Swatara."

Surgeon THOMAS HILAND granted leave of absence for one year, with permission to leave the United States.

Surgeon WILLIAM J. SIMON and P. A. Surgeon M. H. CRAWFORD ordered to report on November 1 for duty on board the U.S. steam-ship "Trenton."